NOTE

This Microfiche meets the quality requirements of the American National Standard for Microfiche of Documents (ANSI PH5.9-1975). However, because of imperfections in the document from which it was made, it contains images that are illegible or difficult to read. The source document for this microfiche is the best copy that could be obtained prior to filming.

Congressional Information Service, Inc
Washington, D.C.

COMMITTEE ON BANKING, HOUSING, AND URBAN AFFAIRS

JAKE GARN, Utah, *Chairman*

JOHN TOWER, Texas
JOHN HEINZ, Pennsylvania
WILLIAM L. ARMSTRONG, Colorado
ALFONSE M. D'AMATO, New York
SLADE GORTON, Washington
PAULA HAWKINS, Florida
MACK MATTINGLY, Georgia
CHIC HECHT, Nevada
PAUL TRIBLE, Virginia

WILLIAM PROXMIRE, Wisconsin
ALAN CRANSTON, California
DONALD W. RIEGLE, Jr., Michigan
PAUL S. SARBANES, Maryland
CHRISTOPHER J. DODD, Connecticut
ALAN J. DIXON, Illinois
JIM SASSER, Tennessee
FRANK R. LAUTENBERG, New Jersey

M. DANNY WALL, *Staff Director*
KENNETH A. MCLEAN, *Minority Staff Director*

CONTENTS

THURSDAY, SEPTEMBER 15, 1983

Page
Opening statement of Senator Trible 1
S. 1852 3

WITNESSES

Lawrence J. Brady, Assistant Secretary for Trade Administration, U.S. Department of Commerce 9
  Priority to certain defense contracts 9
  Guarantee loans to private enterprise 9
  Impact of failure to extend the DPA 10
  Oppose H.R. 2782 bill's provisions 11
  Prepared statement 13
Dr. Robert M. Worthington, Assistant Secretary for Vocational and Adult Education, Department of Education 21
  Proposed programs are unnecessary 21
  Prepared statement 24
  Vocational Education and Defense Preparedness Seminar—Proceedings: Foreword 30
    I. Improving Collaborative Efforts in Defense Preparedness—The Role of Vocational Education 33
    II. Defense Related Industrial Base 34
    III. Department of Defense Active Military Forces 37
    IV. Department of Defense Civilian Employees 40
    V. Department of Defense Reserve Military Forces 44
    VI. Department of Defense Military Accessions 47
    VII. Conclusions 52
    Appendixes:
      A. Seminar Agenda 55
      B. Listing of Participants, Presenters, and Planning Committee... 62
      C. Remarks by the Honorable Frank C. Carlucci, Deputy Secretary of Defense 80
      D. Remarks by the Honorable T. H. Bell, Secretary of Education 84
      E. Remarks by Dr. Gene Bottoms, Executive Director, American Vocational Association 87
      F. Remarks by the Honorable Robert M. Worthington, Assistant Secretary of Vocational and Adult Education 95
  Skilled work force shortages identified 98
Dr. James P. Wade, Jr., Principle Deputy Under Secretary of Defense for Research and Engineering, Department of Defense, accompanied by Kenneth R. Foster, Staff Director, Material Policy, and Jack Eck, Staff Specialist for Materials 100
  Commitments made to keep defense production on schedule 101
  Objectives under review 101
  Provide annually list of industry problem areas 102
  Prepared statement 104
Panel discussion:
  Failure to use lion's share of appropriations 110
  Caution in starting expansion programs 112
  Why not buy American? 113

Page

Bernard A. Maguire, Associate Director for National Preparedness Programs, Federal Emergency Management Agency 115
  Prepared statement 115
    Priorities for materials and equipment 117
    Priorities for strategic mobility 117
    Machine tool trigger order program 119
    Critical industrial capacity for mobilization 119
    National defense executive reserve (NDER) 119
    Summary 120
Kevin Boland, Senior Associate Director, Resources, Community and Economic Development Division, General Accounting Office, accompanied by Linda Koontz, senior evaluator, Charles Cotton, senior evaluator, and Thomas Armstrong, attorney 121
  DOD contracts receive preferential treatment 121
  Selecting title III projects 122
  Prepared statement 126
    Extending the DPA 127
    Renewed Federal interest in title III 128
    The national security benefits as well as the economic costs of each title III project should be adequately justified 129
    DOD has moved to establish a more structured process to develop future title III projects 131
    Matters for consideration by the Congress 133
    Attachment I—Criteria for selecting title III projects developed by DOD and OMB 135
    Attachment II—Proposed amendments to title III of the DPA to include project proposal justification criteria 137
    Attachment III—Proposed amendments to title III of the DPA to provide for increased congressional oversight 140

EXECUTIVE SESSION

Difference of views within the Services 153
DOD proposal to purchase PAM questionable 153
Second possible manufacturer of PAM 154
Explanation of request for proposal process 156
Ideas not sufficiently evaluated 156
General DOD comments on the classified GAO statement 159

ADDITIONAL MATERIAL SUPPLIED FOR THE RECORD

U.S. General Accounting Office, letter dated September 29, 1983, additional comments submitted for the record 202
Congressional Budget Office, cost estimate for S. 1852 submitted for the record 204
Federal Emergency Management Agency, letter in support of extension of the DPA from Louis O. Ginffrida, Director 208
McQuiston Associates, Los Angeles, Calif., comments on the extension of the DPA 209

REEXTENSION OF THE DEFENSE PRODUCTION ACT

THURSDAY, SEPTEMBER 15, 1983

U.S. SENATE,
COMMITTEE ON BANKING, HOUSING, AND URBAN AFFAIRS,
Washington, D.C.

The committee met at 9:30 a.m., in room SD–538, of the Dirksen Senate Office Building; Senator Paul S. Trible presiding.

Present: Senators Trible and Hecht.

OPENING STATEMENT OF SENATOR TRIBLE

Senator TRIBLE. Good morning. This session of the Senate Banking Committee will come to order.

I would like to welcome you here today for these hearings on the reextension of the Defense Production Act.

The Defense Production Act is the foundation for our Nation's defense preparedness capability, both in times of war and times of peace. The bill provides the President with the authority to: Divert certain materials and facilities to defense purposes; reduce time required for full mobilization; insure availability of strategic and critical materials, including energy; insure productive capability and supply; and to develop preparedness programs.

This legislation has been routinely extended since the 1950's, but in recent years has come perilously close to expiring in the logjam of legislation that invariably occurs in the closing days of the Congress. For this reason, I am strongly advocating a 5-year reextension of the Defense Production Act.

Title I of the act contains vital contracting authorities needed to avoid substantial delays and accompanying increases in the cost of defense contracts. At a time when eliminating waste in Government spending is on everyone's mind, it seems foolish to continue flirting with the expiration of a statute which is responsible for saving so many taxpayer dollars.

The administration strongly supports an extension of 5 years in the Defense Production Act and has submitted legislation to the Congress to accomplish this purpose. In addition to FEMA, the Department of Defense and the Department of Commerce have both expressed their support for a 5-year extension of the Defense Production Act, and I am sure they will reiterate that position here today.

Today's hearing will focus on three major issues. First, the need for a long-term extension of the act; second, we will briefly examine the proposals under consideration in the other body to dramatically expand the scope of the Defense Production Act; and, finally, we will give careful consideration to proposals made by the Department of Defense to establish a program of price guarantees for a variety of defense-related materials.

Again, I welcome our witnesses here today, and I look forward to your testimony.

Senator Hecht, we appreciate your being here today, as well.

[The following was received for the record:]

Calendar No. 433

98TH CONGRESS
1ST SESSION

S. 1852

To extend the expiration date of the Defense Production Act of 1950.

IN THE SENATE OF THE UNITED STATES

SEPTEMBER 19, 1983

Mr. TRIBLE introduced the following bill; which was read twice and referred to the Committee on Banking, Housing, and Urban Affairs

SEPTEMBER 29 (legislative day, SEPTEMBER 26), 1983

Reported by Mr. TRIBLE, with amendments

[Omit the part struck through and insert the part printed in italic]

A BILL

To extend the expiration date of the Defense Production Act of 1950.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That the first sentence of section 717(a) of the Defense Production Act of 1950 (50 U.S.C. App. 2166(a)) is amended by striking out "September 30, 1983" and inserting in lieu thereof "September 30, 1988".

Sec. 2. (a) Section 301(a) of the Defense Production Act of 1950 (50 U.S.C. App. 2091(a)) is amended by adding at the end thereof the following:

"(3) A guarantee may be entered into under this section only if the President determines that—

"(A) the guaranteed contract or operation is for a material, or the performance of a service, that is essential to the national defense;

"(B) without the guarantee, United States industry cannot reasonably be expected to provide the capability for the needed material or service in a timely manner;

"(C) the guarantee is the most cost-effective, expedient, and practical alternative for meeting the need;

"(D) the United States national defense demand is equal to or greater than the output of domestic industrial capability *which is reasonably determined to be available for national defense*, including the output to be established through the guarantee; and

"(E) the material or service of the guaranteed contract has been identified in a specification agreed to by the United States and the contractor.".

(b) Section 302 of such Act (50 U.S.C. App. 2092) is amended by inserting before the period at the end of the second sentence the following: ", and (3) no such loan may be made unless the President determines that—

"(A) the loan is for the expansion of capacity, the development of a technological process, or the production of materials essential to the national defense;

"(B) without the loan, United States industry cannot reasonably be expected to provide the needed capacity, technological processes or materials in a timely manner;

"(C) the loan is the most cost-effective, expedient, and practical alternative method for meeting the need;

"(D) the United States national defense demand is equal to or greater than domestic industrial capability *which is reasonably determined to be available for national defense*, including the output to be established through the loan; and

"(E) the material or service has been identified in a specification agreed to by the United States and the ~~borrower.~~ *borrower*".

(c) Section 303(a) of such Act (50 U.S.C. App. 2093(a)) is amended by adding at the end thereof the following: "The President may not ~~take an action~~ *execute a contract* under this subsection unless he determines that—

"(1) the mineral, metal, or material is essential to the national defense;

"(2) without Presidential action under authority of this section, United States industry cannot reasonably be expected to provide the capability for the needed mineral, metal, or material in a timely manner;

"(3) purchases, purchase commitments, or other action pursuant to this section are the most cost-effective, expedient, and practical alternative method for meeting the need;

"(4) the United States national defense demand for the mineral, metal, or material is equal to or greater than the output of domestic industrial capability *which is reasonably determined to be available for national defense*, including the output to be established through the purchase, purchase commitment, or other action; and

"(5) the mineral, metal or material has been identified in a specification agreed to by the United States and the contractor.".

SEC. 3. (a) Section 301(e)(1) of the Defense Production Act of 1950 (50 U.S.C. App. 2091(e)(1)) is amended to read as follows:

"(e)(1) Except during periods of national emergency declared by the Congress or the President, a guarantee may be made under this section only if ~~such guarantee~~ *the industrial resource shortfall which such guarantee is intended to correct* has been identified in the budget, or amendments thereto, submitted to the Congress, accompanied by a statement from the President ~~explaining the determinations required by subsection (a)(3) of this section, and if such guarantee has been authorized by law~~ *demonstrating that the budget submission is in accordance with the provisions of subsection (a)(3) of this section, and if guarantees to correct such industrial resource shortfall have been authorized by law.*".

(b) Section 302(2) of such Act (50 U.S.C. App. 2092(2)) is amended to read as follows: "(2) no such loan may be made under this section, except during periods of national emergency declared by the Congress or the President, unless ~~such loan has been identified in the budget, or amendments thereto, submitted to the Congress, accompanied by a statement from the President explaining the determinations required by paragraph (3) of this section, and unless such loan has been authorized by law~~ *the industrial resource shortfall which such loan is intended to correct has been identified in the budget, or amendments thereto, submitted to the Congress, accompanied by a statement from the President demonstrating that the budget submission is in accordance with the provisions of paragraph (3) of this section, and unless such loans to correct such industrial resource shortfall have been authorized by law*".

(c) Section 303(a) of such Act (50 U.S.C. App. 2093(a)) is amended by adding at the end thereof the following: "Except during periods of national emergency declared by the President or the Congress, the President shall take no action under authority of this section unless ~~such action~~ *the industrial resource shortfall which such action is intended to correct* has been identified in the budget, or amendments thereto, submitted to the Congress, accompanied by a statement from the President ~~explaining the determinations required by the preceding sentence of this subsection, and unless such action has been authorized by law~~ *demonstrating that the budget submission is in accordance with the provisions of the preceding sentence, and unless actions to correct such industrial resource shortfall have been authorized by law.*".

Senator TRIBLE. Next, I will call on Lawrence Brady, the Assistant Secretary for Trade Administration of the U.S. Department of Commerce.

Secretary Brady, welcome. We are pleased to have you here with us this morning.

STATEMENT OF LAWRENCE J. BRADY, ASSISTANT SECRETARY FOR TRADE ADMINISTRATION, U.S. DEPARTMENT OF COMMERCE

Mr. BRADY. Mr. Chairman and members of the committee, thank you for asking me to reappear before you today to present the Department of Commerce's and the administration's support for a multiyear extension of the Defense Production Act. This act is vital to our Nation's defense.

As I mentioned to you last March, the act forms the basis for much of the civilian support currently provided to existing national security programs and provides essential authority to maintain the necessary level of mobilization readiness.

Your letter of invitation asks me to provide my views on one, the need to extend the act and the consequences that would result, should the Congress fail to do so; two, the Department of Defense's proposed use of title III authorities to enter into purchase guarantee agreements for a variety of defense materials; and three, the House's proposed amendments to the act. I will be happy to address each of these issues.

PRIORITY TO CERTAIN DEFENSE CONTRACTS

Title I of the act authorizes the President to require industry to accept and give priority to certain defense contracts and orders, and to allocate materials and facilities in support of certain defense and energy programs.

In Commerce, we administer the Defense Materials System and the Defense Priorities System which help ensure that defense programs are maintained on schedule by providing priority treatment for the purchase of products and materials by defense agencies, contractors, and their suppliers. These systems also provide the administrative means by which the total industrial resources of the United States could be mobilized in an emergency.

GUARANTEE LOANS TO PRIVATE ENTERPRISE

Title III authorizes the President to support the expansion of the Nation's productive capacity to meet our national defense needs. It includes the authority to guarantee loans to private enterprise, in order to expedite performance on Government contracts for materials and services needed for the national defense. It also contains authority to provide loans to private business for expansion of capacity, for development of technological processes, and for production of essential materials, including the exploration, development, and mining of strategic and critical metals and minerals. In addition, title III authorizes execution of purchase agreements for minerals and other strategic materials to insure domestic production in case of mobilization.

Title VII of the act provides authority under which representatives of industry and other interests may, with the approval of the

President, enter into voluntary agreements serving defense purposes without violating the antitrust laws.

Title VII also provides the basic authority for operation of the National Defense Executive Reserve—a pool of individuals with proven executive ability who have agreed to undergo special training to perform necessary Federal functions in a national emergency. The NDER is one of the more important elements in our efforts to develop programs which would make us capable of functioning efficiently in the event of such an emergency.

Title VII also gives Government the authority to collect proprietary data. Such information is essential to industrial mobilization planning.

IMPACT OF FAILURE TO EXTEND THE DPA

I believe strongly that the DPA is an essential part of national security planning and the national defense. Failure to extend the act on a timely basis, even for a short period, would be most detrimental.

Failure to extend the Defense Production Act could result in serious delays to critical defense programs and would jeopardize our ability to prepare for national security emergencies.

For these reasons, we strongly urge a multiyear extension of the Defense Production Act.

With respect to DOD's title III request for $200 million in fiscal year 1984 to provide purchase commitments for critical items, I heartily endorse this request. As I believe the committee knows, I am the chairman of this administration's Emergency Mobilization Preparedness Board's Working Group on Industrial Mobilization.

This working group is identifying the industries that make up the vital core of our defense industrial base and the state of readiness of those industries to respond to defense needs in any emergency.

For over 30 years, we have built a national stockpile on the assumption that we cannot rely on many imports during times of national emergency. Our defense readiness includes insuring the availability of reliable suppliers. We cannot afford to let the cries for international economic interdependence blind us to this fact. Interdependence should be limited to a level compatible with our great power status and responsibilities in the world.

In addition, our manufacturing sector relies increasingly on a supply of critical minerals and materials obtained from potentially unreliable foreign sources. Southern Africa and the Soviet Union provide more than 99 percent of the world's commercially recoverable reserves of platinum group metals; 98 percent of the world's manganese ore; 96 percent of the world's chrome.

In short, the United States is at a critical juncture in deciding the future of its defense base. Many of the most important defense industries are shrinking to a low level of capacity. While there is nothing wrong with looking to the future and concentrating our energies in those areas where we do best—and the marketplace will continue to see that this is done—we must be realistic about the true dimensions of the competition we face and insure that our country's needs are met.

However, having said all this, I also believe that to offer grants, loans, or procurement contracts across the board to failing private sector defense-related industries would be a dangerous and self-defeating policy. Such an approach would fast lead to total Government support of a huge portion of the private sector approaching the level of Europe or Japan.

I personally feel that we cannot afford to copy the economic development strategies of other countries. Accordingly, I believe the act's title III programs should be narrowly targeted to particularly critical areas of defense need where the free market cannot reasonably be expected to meet those needs in a timely manner. We must remember, also, that the administration's defense buildup has contributed to the revitalization of the defense industrial base.

The types of programs DOD is proposing for title III funding represent appropriate Government intervention into the marketplace to insure a domestic capability of critical items, especially for those items where we have become unacceptably dependent on foreign sources. I see these efforts as important complements to our national stockpile.

OPPOSE H.R. 2782 PROVISIONS

Finally, with respect to the House bill, H.R. 2782, the Defense Industrial Base Revitalization Act, I agree with the need to revitalize the defense industrial base; however, I strongly oppose the bill's provisions, its excessive funding levels, and the manner in which it attempts to address the base problems.

We, in the administration, cannot support using the act as a vehicle for programs relating to skills training, grants to universities, industry subsidies, and loans and loan guarantees that are not specifically established to correct identified weaknesses in the defense industrial base. H.R 2782's $2.85 billion program would aggravate Federal deficits and drive up interest rates. We believe that the act's existing authorities are sufficient, especially with DOD's title III request for $200 million.

We believe that the most cost-effective and logical approach to maintaining and revitalizing the defense industrial base is to select specific objectives and target them for the application of funds to solve identified problems, as DOD has done.

In addition, H.R. 2782 proposes some troubling amendments to title I of the act: the priorities and allocations provisions that are so essential and have served us so well. The House amendments require, as part of any defense procurement contract of over $5,000,000, a commitment by the contractor to conduct or sponsor skills training whenever additional skilled workers will be necessary and there is a shortage of such workers in the area in which the contract or a subcontract will be performed.

I believe this sort of micromanagement of defense contracts is unnecessary and may result in serious delays to performance on defense orders, excessive cost to contractors, and, through unnecessary Government intervention, create new economic inefficiencies.

In addition, the House bill would prohibit the President, except under certain conditions, from exercising authorities relative to priority performance of contracts and allocation of materials, unless he first submits to Congress for a 60-day period any change in approved Department of Defense urgency determinations for critical defense production programs. Again, I believe this provision represents an unnecessary intrusion into the administration of executive branch responsibilities, and may delay the assignment of appropriate priority support to programs of the highest national urgency.

Finally, the House bill would add another new subsection to section 101 of the Defense Production Act prohibiting the President, except under certain conditions, from exercising the priorities and allocations authorities for any defense contract, if items or components are obtained from foreign manufacturers.

While my testimony today and at other times should leave no doubt as to my commitment to a strong, U.S. supplier base, I believe the House proposal is fraught with difficulty and presents a very real possibility of major delays to defense programs. First, manufacturers located outside of the United States are not subject to the provisions of title I of the act. However, complex systems manufactured in this country, containing foreign-produced components, are subject to the act.

In this case, though, it will often be impossible to ascertain in any timely fashion which systems contain which foreign-produced items. Even if such foreign content can be determined, it will often require a high degree of speculation for the Secretary of Defense to determine for a particular purchase the consequences for the United States of dependence on foreign manufacturers.

While the thrust of this amendment is desirable, that is, to obtain a better grasp on our growing dependence on foreign sources for critical items, I do not believe the proposed amendment solves the problem. To the contrary, it will likely add delays to the procurement process.

These delays would be particularly stressful in an emergency or during surge procurement situations.

In sum, then, Mr. Chairman, we strongly support a multiyear extension of the Defense Production Act and endorse DOD's request for $200 million under title III, but strongly oppose H.R. 2782, the enactment of which would not be in accord with the President's program.

Thank you for the opportunity to testify; I will be pleased to answer any questions.

Senator **Trible**. Thank you, Secretary. Let me ask you just one question.

In your testimony, you heartily endorse—those are your words—the request of DOD for $200 million in fiscal year 1984 to provide purchase commitments for critical items.

Is that a broad endorsement of policy, or are you today able to discuss those specific items?

Mr. **Brady**. It's a broad endorsement of policy, Mr. Chairman.

Senator **Trible**. All right. I'll not call on you then to defend in advance those specific requests.

I thank you for appearing before us today. You have been here before. It's my hope that we can extend the Defense Production Act for a lengthy period of time, so it will not be necessary for you to return immediately and discuss this subject again.

Senator Hecht says he has no questions, and we thank you for appearing.

Mr. Brady. Thank you, Mr. Chairman.

[The complete statement follows:]

TESTIMONY OF LAWRENCE J. BRADY, ASSISTANT SECRETARY FOR TRADE ADMINISTRATION, U.S. DEPARTMENT OF COMMERCE

Mr. Chairman and members of the Committee, thank you for asking me to reappear before you today to present the Department of Commerce's and the Administration's support for a multi-year extension of the Defense Production Act. This Act is vital to our nation's defense.

As I mentioned to you last March, the Act forms the basis for much of the civilian support currently provided to existing national security programs and provides essential authority to maintain the necessary level of mobilization readiness.

Your letter of invitation asks me to provide my views on 1) the need to extend the Act and the consequences that would result should the Congress fail to do so; 2) the Department of Defense's proposed use of Title III authorities to enter into purchase guarantee agreements for a variety of defense materials; and 3) the House's proposed amendments to the Act. I will be happy to address each of these issues.

Title I of the Act authorizes the President to require industry to accept and give priority to certain defense contracts and orders, and to allocate materials and facilities in support of certain defense and energy programs. In Commerce, we administer the Defense Materials System and the Defense Priorities System which help ensure that defense programs are maintained on schedule by providing priority treatment for the purchase of products and materials by defense agencies, contractors, and their suppliers. These systems also provide the administrative means by which the total industrial resources of the United States could be mobilized in an emergency.

TITLE III AUTHORIZES THE PRESIDENT TO SUPPORT THE EXPANSION OF THE NATION'S PRODUCTIVE CAPACITY TO MEET OUR NATIONAL DEFENSE NEEDS. IT INCLUDES THE AUTHORITY TO GUARANTEE LOANS TO PRIVATE ENTERPRISE IN ORDER TO EXPEDITE PERFORMANCE ON GOVERNMENT CONTRACTS FOR MATERIALS AND SERVICES NEEDED FOR THE NATIONAL DEFENSE. IT ALSO CONTAINS AUTHORITY TO PROVIDE LOANS TO PRIVATE BUSINESS FOR EXPANSION OF CAPACITY, FOR DEVELOPMENT OF TECHNOLOGICAL PROCESSES, AND FOR PRODUCTION OF ESSENTIAL MATERIALS, INCLUDING THE EXPLORATION, DEVELOPMENT, AND MINING OF STRATEGIC AND CRITICAL METALS AND MINERALS. IN ADDITION, TITLE III AUTHORIZES EXECUTION OF PURCHASE AGREEMENTS FOR MINERALS AND OTHER STRATEGIC MATERIALS TO ENSURE DOMESTIC PRODUCTION IN CASE OF MOBILIZATION.

TITLE VII OF THE ACT PROVIDES AUTHORITY UNDER WHICH REPRESENTATIVES OF INDUSTRY AND OTHER INTERESTS MAY, WITH THE APPROVAL OF THE PRESIDENT, ENTER INTO VOLUNTARY AGREEMENTS SERVING DEFENSE PURPOSES WITHOUT VIOLATING THE ANTI-TRUST LAWS.

TITLE VII ALSO PROVIDES THE BASIC AUTHORITY FOR OPERATION OF THE NATIONAL DEFENSE EXECUTIVE RESERVE -- A POOL OF INDIVIDUALS WITH PROVEN EXECUTIVE ABILITY WHO HAVE AGREED TO UNDERGO SPECIAL TRAINING TO PERFORM NECESSARY FEDERAL FUNCTIONS IN A NATIONAL EMERGENCY. THE NDER IS ONE OF THE MORE IMPORTANT ELEMENTS IN OUR EFFORTS TO DEVELOP PROGRAMS WHICH WOULD MAKE US CAPABLE OF FUNCTIONING EFFICIENTLY IN THE EVENT OF SUCH AN EMERGENCY.

TITLE VII ALSO GIVES GOVERNMENT THE AUTHORITY TO COLLECT PROPRIETARY DATA. SUCH INFORMATION IS ESSENTIAL TO INDUSTRIAL MOBILIZATION PLANNING.

I BELIEVE STRONGLY THAT THE DPA IS AN ESSENTIAL PART OF NATIONAL SECURITY PLANNING AND THE NATIONAL DEFENSE. FAILURE TO EXTEND THE ACT ON A TIMELY BASIS, EVEN FOR A SHORT PERIOD, WOULD BE MOST DETRIMENTAL. FAILURE TO EXTEND THE DEFENSE PRODUCTION ACT COULD RESULT IN SERIOUS DELAYS TO CRITICAL DEFENSE PROGRAMS AND WOULD JEOPARDIZE OUR ABILITY TO PREPARE FOR NATIONAL SECURITY EMERGENCIES.

FOR THESE REASONS, WE STRONGLY URGE A MULTI-YEAR EXTENSION OF THE DEFENSE PRODUCTION ACT.

WITH RESPECT TO DOD'S TITLE III REQUEST FOR $200 MILLION IN FY 1984 TO PROVIDE PURCHASE COMMITMENTS FOR CRITICAL ITEMS, I HEARTILY ENDORSE THIS REQUEST. AS I BELIEVE THE COMMITTEE KNOWS, I AM THE CHAIRMAN OF THIS ADMINISTRATION'S EMERGENCY MOBILIZATION PREPAREDNESS BOARD'S WORKING GROUP ON INDUSTRIAL MOBILIZATION. THIS WORKING GROUP IS IDENTIFYING THE INDUSTRIES THAT MAKE UP THE VITAL CORE OF OUR DEFENSE INDUSTRIAL BASE AND THE STATE OF READINESS OF THOSE INDUSTRIES TO RESPOND TO DEFENSE NEEDS IN ANY EMERGENCY.

FOR OVER THIRTY YEARS, WE HAVE BUILT A NATIONAL STOCKPILE ON THE ASSUMPTION THAT WE CANNOT RELY ON MANY IMPORTS DURING TIMES OF NATIONAL EMERGENCY. OUR DEFENSE READINESS INCLUDES ENSURING THE AVAILABILITY OF RELIABLE SUPPLIERS. WE CANNOT AFFORD TO LET THE CRIES FOR INTERNATIONAL ECONOMIC INTERDEPENDENCE BLIND US TO THIS FACT. INTERDEPENDENCE SHOULD BE LIMITED TO A LEVEL COMPATIBLE WITH OUR GREAT POWER STATUS AND RESPONSIBILITIES IN THE WORLD.

IN ADDITION, OUR MANUFACTURING SECTOR RELIES INCREASINGLY ON A SUPPLY OF CRITICAL MINERALS AND MATERIALS OBTAINED FROM POTENTIALLY UNRELIABLE FOREIGN SOURCES. SOUTHERN AFRICA AND THE SOVIET UNION PROVIDE MORE THAN 99 PERCENT OF THE WORLD'S COMMERCIALLY RECOVERABLE RESERVES OF PLATINUM GROUP METALS; 98 PERCENT OF THE WORLD'S MANGANESE ORE; 96 PERCENT OF THE WORLD'S CHROME.

IN SHORT, THE UNITED STATES IS AT A CRITICAL JUNCTURE IN DECIDING THE FUTURE OF ITS DEFENSE BASE. MANY OF THE MOST IMPORTANT DEFENSE INDUSTRIES ARE SHRINKING TO A LOW LEVEL OF CAPACITY. WHILE THERE IS NOTHING WRONG WITH LOOKING TO THE FUTURE AND CONCENTRATING OUR ENERGIES IN THOSE AREAS WHERE WE DO BEST (AND THE MARKETPLACE WILL CONTINUE TO SEE THAT THIS IS DONE), WE MUST BE REALISTIC ABOUT THE TRUE DIMENSIONS OF THE COMPETITION WE FACE AND ENSURE THAT OUR COUNTRY'S NEEDS ARE MET.

HOWEVER, HAVING SAID ALL THIS, I ALSO BELIEVE THAT TO OFFER GRANTS, LOANS, OR PROCUREMENT CONTRACTS ACROSS THE BOARD TO FAILING PRIVATE SECTOR DEFENSE-RELATED INDUSTRIES WOULD BE A DANGEROUS AND SELF-DEFEATING POLICY. SUCH AN APPROACH WOULD FAST LEAD TO TOTAL GOVERNMENT SUPPORT OF A HUGE PORTION OF THE PRIVATE SECTOR APPROACHING THE LEVEL OF EUROPE OR JAPAN. I PERSONALLY FEEL THAT WE CANNOT AFFORD TO COPY THE ECONOMIC DEVELOPMENT STRATEGIES OF OTHER COUNTRIES. ACCORDINGLY, I BELIEVE THE ACT'S TITLE III PROGRAMS SHOULD BE NARROWLY TARGETED TO PARTICULARLY CRITICAL AREAS OF DEFENSE NEED WHERE THE FREE MARKET CANNOT REASONALLY BE EXPECTED TO MEET THOSE NEEDS IN A TIMELY MANNER. WE MUST REMEMBER, ALSO, THAT THE ADMINISTRATION'S DEFENSE BUILD-UP HAS CONTRIBUTED TO THE REVITALIZATION TO THE DEFENSE INDUSTRIAL BASE.

THE TYPES OF PROGRAMS DOD IS PROPOSING FOR TITLE III FUNDING REPRESENT APPROPRIATE GOVERNMENT INTERVENTION INTO THE MARKET PLACE TO ENSURE A DOMESTIC CAPABILITY OF CRITICAL ITEMS, ESPECIALLY FOR THOSE ITEMS WHERE WE HAVE BECOME UNACCEPTABLY DEPENDENT ON FOREIGN SOURCES. I SEE THESE EFFORTS AS IMPORTANT COMPLEMENTS TO OUR NATIONAL STOCKPILE.

FINALLY, WITH RESPECT TO THE HOUSE BILL, H.R. 2782, THE DEFENSE INDUSTRIAL BASE REVITALIZATION ACT, I AGREE WITH THE NEED TO REVITALIZE THE DEFENSE INDUSTRIAL BASE; HOWEVER, I STRONGLY OPPOSE THE BILL'S PROVISIONS, ITS EXCESSIVE FUNDING LEVELS, AND THE MANNER IN WHICH IT ATTEMPTS TO ADDRESS THE BASE PROBLEMS.

WE CANNOT SUPPORT USING THE ACT AS A VEHICLE FOR PROGRAMS RELATING TO SKILLS TRAINING, GRANTS TO UNIVERSITIES, INDUSTRY SUBSIDIES, AND LOANS AND LOAN GUARANTEES THAT ARE NOT SPECIFICALLY ESTABLISHED TO CORRECT IDENTIFIED WEAKNESSES IN THE DEFENSE INDUSTRIAL BASE. H.R. 2782'S $2.85 BILLION PROGRAM WOULD AGGRAVATE FEDERAL DEFICITS AND DRIVE UP INTEREST RATES. WE BELIEVE THAT THE ACT'S EXISTING AUTHORITIES ARE SUFFICIENT, ESPECIALLY WITH DOD'S TITLE III REQUEST FOR $200 MILLION.

WE BELIEVE THAT THE MOST COST-EFFECTIVE AND LOGICAL APPROACH TO MAINTAINING AND REVITALIZING THE DEFENSE INDUSTRIAL BASE IS TO SELECT SPECIFIC OBJECTIVES AND TARGET THEM FOR THE APPLICATION OF FUNDS TO SOLVE IDENTIFIED PROBLEMS, AS DOD HAS DONE.

In addition, H.R. 2782 proposes some troubling amendments to Title I of the Act: the priorities and allocations provisions that are so essential and have served us so well. The House amendments require, as part of any defense procurement contract of over $5,000,000, a commitment by the contractor to conduct or sponsor skills training whenever additional skilled workers will be necessary and there is a shortage of such workers in the area in which the contract or a subcontract will be performed.

I believe this sort of micro-management of defense contracts is unnecessary and may result in serious delays to performance on defense orders, excessive cost to contractors, and, through unnecessary government intervention, create new economic inefficiencies.

In addition, the House Bill would prohibit the President, except under certain conditions, from exercising authorities relative to priority performance of contracts and allocation of materials, unless he first submits to Congress for a 60-day period any change in approved Department of Defense urgency determinations for critical defense production programs. Again, I believe this provision represents an unnecessary intrusion into the administraton of Executive Branch responsibilities, and may delay the assignment of appropriate priority support to programs of the highest national urgency.

FINALLY, THE HOUSE BILL WOULD ADD ANOTHER NEW SUBSECTION TO SECTION 101 OF THE DEFENSE PRODUCTION ACT PROHIBITING THE PRESIDENT, EXCEPT UNDER CERTAIN CONDITIONS, FROM EXERCISING THE PRIORITIES AND ALLOCATIONS AUTHORITIES FOR ANY DEFENSE CONTRACT IF ITEMS OR COMPONENTS ARE OBTAINED FROM FOREIGN MANUFACTURERS.

WHILE MY TESTIMONY TODAY AND AT OTHER TIMES SHOULD LEAVE NO DOUBT AS TO MY COMMITMENT TO A STRONG, U.S. SUPPLIER BASE, I BELIEVE THE HOUSE PROPOSAL IS FRAUGHT WITH DIFFICULTY AND PRESENTS A VERY REAL POSSIBILITY OF MAJOR DELAYS TO DEFENSE PROGRAMS. FIRST, MANUFACTURERS LOCATED OUTSIDE OF THE UNITED STATES ARE NOT SUBJECT TO THE PROVISIONS OF TITLE I OF THE ACT. HOWEVER, COMPLEX SYSTEMS MANUFACTURED IN THIS COUNTRY, CONTAINING FOREIGN PRODUCED-COMPONENTS, ARE SUBJECT TO THE ACT. IN THIS CASE, THOUGH, IT WILL OFTEN BE IMPOSSIBLE TO ASCERTAIN IN ANY TIMELY FASHION WHICH SYSTEMS CONTAIN WHICH FOREIGN PRODUCED ITEMS. EVEN IF SUCH FOREIGN CONTENT CAN BE DETERMINED, IT WILL OFTEN REQUIRE A HIGH DEGREE OF SPECULATION FOR THE SECRETARY OF DEFENSE TO DETERMINE FOR A PARTICULAR PURCHASE THE CONSEQUENCES FOR THE U.S. OF DEPENDENCE ON FOREIGN MANUFACTURERS. WHILE THE THRUST OF THIS AMENDMENT IS DESIRABLE, *I.E.*, TO OBTAIN A BETTER GRASP ON OUR GROWING DEPENDENCE ON FOREIGN SOURCES FOR CRITICAL ITEMS, I DO NOT BELIEVE THE PROPOSED AMENDMENT SOLVES THE PROBLEM. TO THE CONTRARY, IT WILL LIKELY ADD DELAYS TO THE PROCUREMENT PROCESS. THESE DELAYS WOULD BE PARTICIULARLY STRESSFUL IN AN EMERGENCY OR DURING SURGE PROCUREMENT SITUATIONS.

IN SUM, THEN, WE STRONGLY SUPPORT A MULTI-YEAR EXTENSION OF THE DEFENSE PRODUCTION ACT AND ENDORSE DOD'S REQUEST FOR $200 MILLION UNDER TITLE III, BUT STRONGLY OPPOSE H.R. 2782, THE ENACTMENT OF WHICH WOULD NOT BE IN ACCORD WITH THE PRESIDENT'S PROGRAM.

THANK YOU FOR THE OPPORTUNITY TO TESTIFY; I WILL BE PLEASED TO ANSWER ANY QUESTIONS.

Senator **TRIBLE**. Next, we will call on Dr. Robert Worthington, Assistant Secretary for Vocational and Adult Education, Department of Education.

Mr. Secretary, we are pleased to have you here with us today.

STATEMENT OF DR. ROBERT M. WORTHINGTON, ASSISTANT SECRETARY FOR VOCATIONAL AND ADULT EDUCATION, DEPARTMENT OF EDUCATION

Dr. **WORTHINGTON**. Mr. Chairman and members of the subcommittee, I am pleased to be here today to present testimony as part of this subcommittee's review of H.R. 2782, the Defense Industrial Base Revitalization Act. I will confine my remarks today to title II of the bill, which provides for a defense-related skills training program and a defense-related equipment assistance program.

The Department opposes these provisions of the bill. These provisions would create two programs relating to the Department's mission: One, a State grant training program for skilled workers in defense industries and two, a discretionary grant program for certain educational institutions to obtain modern equipment needed to train personnel in defense industries.

Although we appreciate that these programs are designed to strengthen the Nation's defense industrial base readiness, we cannot support them.

PROPOSED PROGRAMS ARE UNNECESSARY

These programs are simply unnecessary in view of other existing and proposed legislative authorities.

I will speak to the proposed defense-related skills training program. At the present time, States and local educational agencies are involved in a wide variety of collaborative efforts which address the problem of providing an adequate skilled work force for defense industries.

These activities are being supported with State and local funds, private sector funds, and with Federal funds under the Vocational Education Act. Such skill training programs for defense industries would also be allowable under the proposed Vocational and Adult Education Consolidation Act of 1983, which is supported by the administration and has been introduced in the Senate as S. 1039 and in the House as H.R. 2940.

We feel that the consolidation bill would provide a more appropriate and flexible vehicle for supporting defense-related skill training than would the categorical skill training programs proposed in the Defense Industrial Base Revitalization Act.

Our opposition to the provisions of title II of the Defense Industrial Base Revitalization Act should in no way be construed as a lack of concern with or interest in the problem of skill training for defense preparedness by the Department of Education. To the contrary, the Department has actively supported administration policies relating to strengthening national defense.

Education Secretary T. H. Bell and Defense Secretary Caspar Weinberger have recently agreed to establish a Joint Committee on Training and Education for National Security. This committee will be cochaired by myself and Lawrence J. Korb, Assistant Secretary of Defense for Manpower, Reserve Affairs, and Logistics, and will serve as a forum for the exchange of information on training and education requirements, identify training and education needs within DOD and defense-related industries, develop ways to improve the interaction of defense-related industries with State educational authorities, and undertake joint analyses of common concerns in the area of skill training and education.

Additionally, 2 years ago I established, within the Office of Vocational and Adult Education, a Task Force on Defense Preparedness. Among other things, the task force is setting up a nationwide network of defense preparedness coordinators in State vocational and adult education agencies, is providing technical assistance to State and local educational agencies, and has already compiled an annotated bibliography of materials relating to defense preparedness and skilled worker shortages.

Shortly, my office will launch a major initiative to develop materials to assist State and local vocational educators in developing collaborative training programs with the defense establishment.

The National Center for Research in Vocational Education, which is federally funded through my office, is undertaking three projects relating to skill training for defense preparedness. These projects include the dissemination of military curriculum materials to vocational educators, a study of vocational education's role in defense preparedness, and the preparation of a guide for use by the States to more effectively meet the skilled worker needs of defense contractors.

Last year the Department of Education and the Department of Defense sponsored a seminar on Vocational Education and Defense Preparedness for the purpose of exploring the many possibilities of collaborative efforts between vocational education and defense activities.

A wide variety of case studies of existing defense preparedness efforts linking industry and vocational education was presented and discussed at this seminar. Seminar participants included representatives of the vocational education enterprise, the active military forces, civilian employees of the military, reserve military forces, the National Guard, and the defense industrial base.

I mention these activities to emphasize to the subcommittee that the Department of Education has a vital and continuing interest in the role of vocational education in strengthening the Nation's defense preparedness. Collaborative efforts to answer critical skill shortages in the defense industrial base are occurring at all governmental levels under existing Federal and State authorities.

At this time, I will be pleased to answer any questions that members of the subcommittee might have.

[The complete statement follows:]

Statement of
Robert M. Worthington
Before the
Senate Banking, Housing and Urban Affairs Committee
Subcommittee on Federal Credit Programs
September 15, 1983

Mr. Chairman and Members of the Subcommittee, I am pleased to be here today to present testimony as part of this Subcommittee's review of H.R. 2782, the Defense Industrial Base Revitalization Act. I will confine my remarks today to Title II of the Bill which provides for a defense-related skills training program and a defense-related equipment assistance program.

The Department opposes these provisions of the Bill.

These provisions would create two programs relating to the Department's mission: (1) a state-grant training program for skilled workers in defense industries and (2) a discretionary grant program for certain educational institutions to obtain modern equipment needed to train personnel in defense industries.

Although we appreciate that these programs are designed to strengthen the Nation's defense industrial base readiness, we cannot support them.

These programs are simply unnecessary in view of other existing and proposed legislative authorities.

I will speak to the proposed Defense-Related Skills Training Program. At the present time, States and local educational agencies are involved in a wide variety of collaborative efforts which address the problem of providing an adequate skilled workforce for defense industries. These activities are being supported with State and local funds, private sector funds, and with Federal funds under the Vocational Education Act. Such skill training programs for defense industries would also be allowable under the proposed Vocational and Adult Education Consolidation Act of 1983 which is supported by the Administration and has been introduced in the Senate (S. 1039) and the House(H.R. 2940). We feel that the consolidation bill would provide a more appropriate and flexible vehicle for supporting defense-related skill training than would the categorical skill training programs proposed in the Defense Industrial Base Revitalization Act.

Our opposition to the provisions of Title II of the Defense Industrial Base Revitalization Act should in no way be construed as a lack of concern with or interest in the problem of skill training for defense preparedness by the Department of Education. To the contrary, the Department has actively supported Administration policies relating to strengthening national defense.

Education Secretary T. H. Bell and Defense Secretary Casper W. Weinberger, have recently agreed to establish a Joint Committee on Training and Education for National Security. This committee will be co-chaired by myself and Lawrence J. Korb, Assistant Secretary of Defense for Manpower, Reserve Affairs, and Logistics, and will:

- serve as a forum for the exchange of information on training and education requirements,
- identify training and education needs within DOD and defense-related industries,
- develop ways to improve the interaction of defense-related industries with State educational authorities, and
- undertake joint analyses of common concerns in the area of skill training and education.

Additionally, two years ago I established, within the Office of Vocational and Adult Education, a Task Force on Defense Preparedness. Among other things, the Task Force is setting up a nation-wide network of defense preparedness coordinators in State vocational and adult education agencies, is providing technical assistance to State and local educational agencies, and has already compiled an annotated bibliography of materials relating to defense preparedness and skilled worker shortages.

Shortly, my Office will launch a major initiative to develop materials to assist State and local vocational educators in developing collaborative training programs with the defense establishment. The National Center for Research in Vocational Education (which is Federally funded through my Office) is undertaking three projects relating to skill training for defense preparedness. These programs include the dissemination of military curriculum materials to vocational educators, a study of vocational education's role in defense preparedness, and the preparation of a guide for use by the States to more effectively meet the skilled worker needs of defense contractors.

Last year the Department of Education and the Department of Defense sponsored a seminar on Vocational Education and Defense Preparedness for the purpose of exploring the many possibilities of collaborative efforts between vocational education and defense activities. A wide variety of case studies of existing defense preparedness efforts linking industry and vocational education was presented and discussed at this seminar. Seminar participants included representatives of the vocational education enterprise, the the active military forces, civilian employees of the military, reserve military forces, the National Guard, and the defense industrial base.

I mention these activities to emphasize to the Subcommittee that the Department has a vital and continuing interest in the role of vocational education in strengthening the Nation's defense preparedness. Collaborative efforts to answer critical skill shortages in the defense industrial base are occurring at all governmental levels under existing Federal and State authorities.

At this time, I will be pleased to answer any questions that members of the Subcommittee might have.

Senator TRIBLE. Thank you, Mr. Secretary.

I think it is important to set forth on the record the existing programs that are serving this Nation's requirements.

To that end, can you tell us precisely how many dollars are being spent by the Federal Government in implementing the Vocational Education Act and how those dollars are being used?

Dr. WORTHINGTON. Under the Vocational Education Act some $721.5 million has been appropriated for fiscal year 1983, of which $707.5 goes to the States by State plans for vocational and technical education.

We should keep in mind this program is basically a State and local program: $1 of each $10 is provided by the Federal Government; 9 of each $10 expended is State and local revenue.

The total amount invested last year was about $7.3 billion of Federal, State, and local moneys, with the Federal Government being the junior partner in the total enterprise.

Senator TRIBLE. And these dollars are used in what way?

Dr. WORTHINGTON. These dollars—the Federal dollars? Are you speaking of Federal or total?

Senator TRIBLE. You can speak about both.

Dr. WORTHINGTON. The Federal dollars serve as a catalyst at the State and local levels to provide special funds for the disadvantaged and special funds for the handicapped. They provide specific set-asides for postsecondary and adult vocational education.

The Federal dollars also assist the States and locals in planning vocational and technical education, and encourage the involvement of State and local advisory committees.

In effect, the Federal funds have a catalytic action and encourage the investment of additional State and local dollars.

Senator TRIBLE. Do these dollars help prepare Americans to provide the kinds of skills that are necessary to support our national defense effort?

Dr. WORTHINGTON. We think they do.

At the national seminar which we conducted last fall, we brought together about 150 educators from the Nation and approximately 150 from the defense industrial base and active military forces. We identified some 50 exemplary programs around the Nation, already in place, where technical institutes, community colleges, vocational schools are working very closely with the defense industrial base.

I would like to provide to the committee, for the record, the proceedings of that conference which describe the many defense-related activities going on.

The State Technical Institute of Memphis, Tenn., for example, has a $10 million contract with the Navy to train technicians for the Navy.

The Oklahoma State Department of Education has a vocational/technical school located on Tinker Air Force Base.

There are many more examples of such programs, and through the collaborative efforts we are promoting with the States, we are hoping efforts will expand in all States. We think they will, particularly with the work of the joint committee that Assistant Secretary Korb and I are heading.

Senator **Trible**. We would welcome, Mr. Secretary, additional information about the Defense Preparedness Symposium about which you have talked, and we will make that a matter of record.

Dr. **Worthington**. I will be pleased to submit that for the record.

[The following was received for the record:]

PROCEEDINGS

VOCATIONAL EDUCATION AND DEFENSE PREPAREDNESS SEMINAR

U.S. DEPARTMENT OF DEFENSE
U.S. DEPARTMENT OF EDUCATION

with the cooperation of the
American Vocational Association

September 29 - October 1, 1982

FOREWORD

This publication is a report of the proceedings from the Vocational Education Defense Preparedness Seminar conducted in Arlington, Virginia, September 29 - October 1, 1982. The impetus for conducting the seminar originated from an exchange of correspondence between Secretary of Defense Caspar W. Weinberger and Secretary of Education T. H. Bell during August 1981. Shortly afterwards, the Department of Education established the Office of Vocational and Adult Education (OVAE) Defense Preparedness Task Force which has continued this momentum to foster collaborative activities.

The purposes of the seminar were as follows: (1) identify currently operational vocational education programs supporting defense preparedness; (2) describe the programs' origins and discuss means for replicating them, and (3) identify resource personnel who could provide assistance in developing similar programs. Representatives from all branches of the Armed Services and key personnel involved in establishing the exemplary programs attended. The seminar provided opportunities for participants to interact with representatives from military installations and defense related industry to learn the scope of training needs.

We want to thank the members of the planning committee from the Department of Education, the Department of Defense, the American Vocational Association, and the State Directors of Vocational Education for their fine work in carrying out the many details of the seminar and in preparing the proceedings of the seminar for publication.

Lawrence J Korb

Lawrence J. Korb, Ph.D
Assistant Secretary of Defense
Manpower, Reserve Affairs, and
Logistics
U.S. Department of Defense

Robert M Worthington

Robert M. Worthington, Ph.D.
Assistant Secretary for
Vocational and Adult Education
U.S. Department of Education

TABLE OF CONTENTS

Foreword ii

I. Improving Collaborative Efforts in Defense Preparedness The Role of Vocational Education 1

II. Defense Related Industrial Base 3

III. Department of Defense Active Military Forces 6

IV. Department of Defense Civilian Employees 9

V. Department of Defense Reserve Military Forces. 13

VI. Department of Defense Military Accessions 16

VII. Conclusions 21

APPENDICES

A. Seminar Agenda 24

B. Listing of Participants, Presenters, and Planning Committee. . . 32

C. Remarks by The Honorable Frank C Carlucci, Deputy Secretary of Defense 52

D. Remarks by The Honorable T. H. Bell, Secretary of Education. . . 57

E. Remarks by Dr. Gene Bottoms, Executive Director American Vocational Association 61

F. Remarks by The Honorable Robert M. Worthington, Assistant Secretary of Vocational and Adult Education 70

I. IMPROVING COLLABORATIVE EFFORTS IN DEFENSE PREPAREDNESS: THE ROLE OF VOCATIONAL EDUCATION.

The current national concern for strengthening defense preparedness implies a role for vocational education in the expansion of our total national defense. Because of a need to clarify some of the parameters and opportunities for vocational education the Vocational Education and Defense Preparedness Seminar, sponsored by the Departments of Defense and Education with the cooperation of the American Vocational Association was held in the Sheraton National Hotel, Arlington, Virginia, September 29 to October 1, 1982. The seminar developed from an exchange of letters between the Secretaries of Defense and Education which reflected a high level concern and possible opportunities for collaborative efforts focusing upon this priority. It was designed to provide a setting for identifying training needs and for describing what is presently occurring in the field.

It became evident quite early in the process of identifying programs involving defense industries and installations that excellent working arrangements and communication take place at the local level. With the expansion of defense, vocational educators may become more involved in the training of personnel in new and expanding technical fields. The remarks of Secretary of Education T.H. Bell and Deputy Secretary of Defense Frank Carlucci made during the seminar provide a rationale for improving the collaborative efforts between the two communities (see Appendices C and D). Those of the Assistant Secretary of Education for Vocational and Adult Education Robert M. Worthington elaborate on the nature and requirements for such cooperative efforts (see Appendix F).

To strengthen the U.S. defense position, it will be necessary to insure that the nation's technological lead over our adversaries is maintained. Current evidence indicates that U.S. technological innovation is lagging. United States patents to foreign nationals has grown from 17 percent of the total issued in 1960 to 38 percent in 1979. In this same 20 year period, the foreign controlled portion of the U.S. consumer electronics market increased from 5.6 percent to 50.5 percent and the foreign market position for metal working machine tools grew from 3.2 percent to 28 percent. To meet peacetime defense needs between now and 1989 in skill fields ranging from riveters to electrical engineers, there must be an annual growth rate of over 3.8 percent.

During the course of the seminar it became clear that formal mechanisms already exist which allow for interaction between the educational, industrial and military communities. The seminar highlighted current examples of successful cooperation between the Military Services, industry and the vocational education community. It is hoped that the goal of the seminar, improved collaboration for defense preparedness, was met and that organizations at the service delivery level will have a clearer idea of how they may better cooperate and support each other.

The organization of this report parallels the seminar organization. During the seminar, five areas related to defense preparedness were discussed and illustrative programs were presented. The five areas were (1) Defense Related Industrial Base, (2) Department of Defense Active Military Forces, (3) Department of Defense Civilian Employees, (4) Department of Defense Reserve Military Forces, and (5) Department of Defense Recruiting Programs. The following sections include an overview of each topical area and summaries of the illustrative programs presented. The last section of the report contains a summary of the major points made during the seminar and suggested future directions. The appendices contain the seminar agenda, a list of attendees, and the speeches given by the Deputy Secretary of Defense, Secretary of Education, Executive Director of the American Vocational Association, and Assistant Secretary for Vocational and Adult Education.

II. DEFENSE RELATED INDUSTRIAL BASE

Overview

Cooperative efforts between industry and vocational education institutions are common occurences. These efforts include training and purchasing equipment. For example, vocational educators involve industry representatives through advisory committees in program planning and goal setting. If a major industry needs or expects to need certain skilled workers, vocational educators will consider these requirements in their program planning. Collaborative efforts may include leasing or utilizing equipment for operator training as well as essential employee and management training. Equipment arrangements may involve purchase by the vocational education institution or purchase by the involved industry with a subsequent loan to the vocational education institution.

The four case studies summarized below represent the types of cooperative efforts found between vocational education institutions and industry. All four are examples of successful efforts involving defense related industry. They are significant because they demonstrate one type of contribution vocational education already makes to defense preparedness, namely training in defense related industry. In addition, the four illustrate communication between the educational community and industry. Open communication helps create the climate for respect and the expectation that whatever job must be done will be done.

Case Studies - Defense Related Industrial Base

Project Title: Improving Skills of Tradesmen in Shipbuilding Industry: Ingalls Shipbuilding/Litton Industries

Presenters:

Travis Cliett
Assistant State Director
Vocational Education
Jackson, Mississippi 39205
(Tel. 601-497-4313)

Mickey Davenport
Manager, General Employment
& Training, Ingalls
Shipbuilding Corp.
Pascagoula, Mississippi 39567
(Tel. 601-935-5102)

Project Summary: Ingalls' work force of 12,400 is Mississippi's largest industrial employer. Starting in the late 1950's, the company has made use of the state's excellent vocational training facilities. To fulfill its skilled work force needs, the program has trained over 10,000 persons during a 10 year period. A variety of programs are offered to employees through vocational schools, Gulf Coast Jr. College, apprenticeship programs and on the job training programs. Programs include entry level training, those for skilled tradesmen, as well as others at the managerial level. The success of the program according to educators and company officials is based on factors such as: close coordination and cooperation between industry and education; programs and courses which are jointly designed by education and business to meet job requirements; state leadership and commitment; and industry support at top levels.

Funding: State, Federal, and Local funds plus support from Ingalls Shipbuilding.

Information: For further information, contact presenters.

Project Title: Bendix Corporation Program

Presenters:

Jim Myers, Dean
Occupational Education
Florida Jr. College
at Jacksonville
Jacksonville, Florida 32202
(Tel. 904-633-8284)

William Hartnett
Coordinator of Training
Bendix Corporation
Jacksonville, Florida 32217
(Tel. 904-731-9500)

Project Summary: The Dean of Occupational Education at Florida Junior College at Jacksonville was instrumental in bringing education and Bendix together to develop and implement the training program necessary for start-up production in the Benedix plant. Florida provides educational assistance in developing and operating economic development projects. Students are selected prior to employment by Bendix and then are offered jobs after sucessful completion of the program. All courses were tailored to meet Bendix's needs to assure the ability of program completers to perform specific jobs.

Funding: Industry Services Training Section, Florida Department of Education

Information: For further information contact the presenters.

Project Title: Pratt and Whitney Program

Presenters:

Elwood A. Padham
Associate Commissioner
Bureau of Vocational Education
Maine Department of Education &
Cultural Services
Augusta, Maine 04333
(Tel. 207-289-2621)

Dana Darling
Supervisor, Training/Education
Pratt and Whitney Aircraft
P.O. Box 454
North Berwick, Maine 03906
(Tel. 207-676-9511)

John M. Lyman
Manager, Technical Training
Pratt and Whitney Aircraft
400 Main St.
East Hartford, Connecticut 06108
(Tel. 203-565-4019)

Project Summary: This program grew out of the belief of the Maine Department of Education and Cultural Services Office that the quality of the work force is Maine's most important resource. The State is committed to providing:

- o Entry level training assistance to employers with an immediate demand for workers resulting from expansion in or relocation in the State,
- o Programs at vocational centers and technical institutes which are designed to meet manpower needs,
- o Upgrading/retraining, and
- o Training facilities

The project provided training in machine tools, inspection, and welding to over 700 Pratt and Whitney employees. All trainees were hired by Pratt and

Whitney at the beginning of training after screening by the employer and Maine Manpower Affairs. Project instructors were State employees. Training was initially conducted at the Southern Maine Vocational Technical Institute. Job specific instructional materials were jointly developed and used. Curriculum revision was accomplished based on an evaluation.

Industry and Education concurred on the following factors that made the program successful: (1) single point of contact for assistance; (2) flexibility - programs designed specifically for Pratt and Whitney and modified through evaluation; (3) and natural trust which developed between industry and education.

Funding: State, Federal and Local funds.

Information: For further information contact the presenters.

Project Title: Rockwell International

Presenters:

Jack Ellis
Industrial Training Supervisor
State of Ohio
65 S. Front St., Rm 904
Columbus, Ohio 43215
(Tel. 614-239-2786)

David A. Meyer
Manager, Technical Training
Rockwell International
Columbus, Ohio 43216
(Tel. 614-239-2922)

The program is sponsored by the State Economic Development Office in cooperation with the State Vocational and Career Education Office and Rockwell International. In this project the State provided a program coordinator located at the plant to help assure the program met company needs. Rockwell plays a strong advisory role by inputting requirements into programs in the following areas: curriculum, equipment, training methods, new technologies, and industrial environment.

Rockwell has over 25 years of experience in cooperating with vocational education to provide training opportunities for employees at entry level, in the skilled trades, for skill upgrading, and in high technology. These training programs are offered in cooperation with vocational schools, technical schools, and colleges, as well as with State specialized training consultants.

Education and industry leaders involved indicated that the keys to this effective and successful program were as follows: establishment of open communication between industry and education; vocational education system understanding of industrial environment; industry understanding of vocational education system and capabilities; and State Economic Development Office and State Vocational and Career Education Office commitment and cooperation.

Funding: State, Federal, and local support and from industry; State provides prime support.

Information: For further information contact the presenters.

III. DEPARTMENT OF DEFENSE ACTIVE MILITARY FORCES

Overview

Training active military forces represents a major activity in the Department of Defense (DoD). In Fiscal Year 1982, there were 1,176,999 graduates from specialized skill training courses for all the services. Generally the services are able to handle training for the majority of occupational specialties. In some technical skill areas, where there are relatively few individuals trained and comparable civilian training exists, it may be cost effective for the services to handle these training needs either by contracting with civilian institutions or encouraging already trained individuals to enter the service. A Navy program, the Lateral Entry Pilot Study, discussed below tests the viability of the latter procedure.

The training activities of the DoD also include advanced skill training or individual development. Some of the case studies which follow illustrate the types of cooperative vocational military programs which now exist. Other similar joint efforts have existed for some time within DoD. Since 1974 almost 300,000 students have graduated from DoD supported programs. One aspect of this program involved plant equipment loans to vocational programs. Equipment worth $52 million has been loaned to vocational programs and is now being utilized by 83,000 students.

Although the broad mission of each of the services may appear similar, the specific vocational education needs of a service or individuals at any local installation are a function of the organization's primary mission and may differ across installations or organizations. Consequently, some training needs may not be entirely satisfied through the usual military avenues and opportunities for vocational education involvment may exist.

Case Studies - Active Duty Military Training

Project Title: Education and Vocational Training at Fort Bragg, North Carolina

Presenters:		
	Raymond E. Gatti Director, Extension Education Fayetteville Technical Institute Fayetteville, NC 28307 (Tel. 919-497-5691)	Dr. William A. Edmundson Director of Education Fort Bragg, NC 28307 (Tel. 919-396-2009)

Project Summary: The programs at Fort Bragg include both long- and short-term specific education and training at the secondary and post secondary levels. They involve cooperation between the local, State, civilian, and military sectors. The North Carolina community college system, for instance, is heavily involved.

Programs are often designed to provide soldiers with basic skills including reading, mathematics, and English as a second language, as well as operational skills, such as communications, vehicle maintenance, and operation of military equipment. Much of the training is cooperatively conducted by the military and contracted with civilian secondary vocational or post-secondary institutions.

Offerings at Fort Bragg include 3000 courses (flexibly scheduled from 7:30 am to 10:30 pm to accommodate about 22,000 students), tuition-free skills development programs (in conjunction with three technical institutes), skill recognition programs supported by the Department of Labor and advanced skills programs designed to help non-commissioned officers to become better managers and communicators.

Funding: DoD Contract.

Information: For further information, contact the presenters.

Project Title: Job Oriented Basic Skills Training in the U.S. Navy

Presenters:

Kathy Irby
Civilian Supervisor, Jobs
Naval Tech
Meridian Junior College
Highway 19 North
Meridian, Mississippi 39309
(Tel. 602-679-2680)

D. Fiene
Head, Navy Contract Programs
State Technical Institute
Memphis, Tennessee 38134
(Tel. 901-577-4111)

Dr. E.G. Aiken
Program Director
Navy Personal Research and
Development Center, Code 15
San Diego, California 92152
(Tel. 714-225-2371)

Dr. N. Kerr
Psychologist
Department of the Navy
Naval Air Station Memphis
Millington, Tennessee 38054
(Tel. 901-872-5594)

Project Summary: The U.S. Navy offers "A" level specialized skill training in thirty-five fields. As an off-shoot of these job-training programs, it provides, and is rapidly expanding, its remedial basic skills training programs (with emphasis on mathematics, vocabulary, and study skills). The Job-Oriented Basic Skill Training programs are both skill and image-builders and a high percentage of enrollees complete the programs. The problems faced, as with any programs conducted across various civilian sectors, include staffing, teacher certification, curriculum standardization, and curriculum organization and administration. On the whole, the program has been successful and shows a great deal of cooperation between vocational technical schools and the U.S. Navy.

Funding: DoD Contract.

Information: For further information contact the presenters.

Project Title: US Marine Corps, AC-Delco Corporation Technical Training Programs

Presenter:

Milton Weatherhead
AC Delco Corporation
10355 Lee Highway
Fairfax, Virginia 22030
(Tel. 703-273-2140)

Project Summary: AC-Delco maintains a training room and instructor at each of 31 General Motors (GM) Training Centers across the United States. Subjects taught include all phases of automotive repair, electrical systems and hydraulics, diesel mechanics, brakes, carburetors, emission control, and electronic fuel injection. A certificate is awarded upon successful completion of each class. There is no fee or tuition for AC-Delco training. Attendance is strictly voluntary and expected only as long as it is a benefit to the participants and their organization. Meals and lodging are at the expense of the student or his organization. The Marines and other services have taken advantage of the service provided by AC-Delco.

Funding: DoD Contract.

Information: For further information contact presenter.

Project Title: Community College of the Air Force

Presenter:
LTC William C. Flinn, Jr., USAF
Interim President, Community College of the Air Force
Maxwell Air Force Base
Montgomery, Alabama 36102
(Tel. 205-273-6386)

Project Summary: The Community College of the Air Force is specifically designed to meet Air Force needs. It integrates on-duty technical education with off-duty civilian education into career relevant associate degree programs. The program is for enlisted personnel on active duty, the Air Force Reserve, and the Air National Guard. The College's associate degree programs are all designed with four main requirements:

Physical Education	4	credits
Technical Education	24-39	
General Education	21	
Management Education	6	
	55-70	Credits

The college is fully accredited by the Southern Association of Colleges and Schools Commission on Colleges. The college has grown into one of the largest community college systems in the world with more than 155,000 registered students whose graduates are accepted for enrollment with Junior standing at numerous colleges and universities.

Funding: DoD Contract.

Information: For further information contact presenter.

IV. DEPARTMENT OF DEFENSE CIVILIAN EMPLOYEES

Overview

The majority of the DoD civilian work force is directly or indirectly involved with the readiness of the operating forces of the Armed Services. DoD civilian employees provide most of the full time support of the Reserve Forces and depot maintenance of ships, aircraft and weapons systems as well as the operations of shore based activities. They are involved in functions such as logistics, intelligence, communications, medical services, training, research, engineering, and acquisition.

Civilian employees provide technical competence and continuity. Unlike military personnel who have a variety of jobs during their career, civilian members of the DoD work in one or relatively few jobs and are able to develop specialized understanding and expertise. Because DoD civilians tend to remain in a position or, if the incumbent leaves, the job functions remain, they provide continuity and their technical competence is particularly important. Upgrading performance skills for many of the nearly one million DoD civilian employees has been a high priority. Regulations require training, supervisory personnel encourage it, and many employees seek out educational opportunities, using their own time and resources to supplement government supported training which not always available.

Insuring technical competence of civilian employees is critical to defense preparedness. The four programs described below illustrate the types of programs which can be provided by vocational education institutions.

Case Studies - DoD Civilian Employee Training

Project Title: Defense Depot, Memphis, Tennessee (DDMT) and the State Technical Institute of Memphis (STIM): Professional Development Program for Defense Depot Memphis Employees

Presenters:

Richard A. Hines
Employee Development Specialist
Defense Depot Memphis
Attn: DDMT-GF
2163 Airways Blvd.
Memphis, Tennessee 38114
(Tel. 901-365-9246)

Kenneth W. Eaton
Coordinator, Business, Industry & Government Training Division.
State Technical Institute of Memphis
5983 Macon Cove
Memphis, Tennessee 38134
(Tel. 901-377-4207)

Project Summary: This program has been a cooperative effort between DDMT and STIM for the past five years. The program has included supervisory training, job instruction training, computer operations, mid-management training, and general job related courses. Objectives of the program have been to train, cross-train and upgrade the requisite abilities of assigned employees in the most economical and effective way. The professional development program for mid-level supervisors was presented in detail.

Funding: State and Federal funds.

Information: For further information contact presenters.

Project Title: Tinker Vocational Technical Training Program

Presenters:

Jacqueline J. Cody
Chief of Training
2854 ABG/DPCT
Tinker Air Force Base,
Oklahoma 73145
(Tel. 405-734-5471)

John V. Provence
Director, Tinker Vo-Tech
Training Center
2854 ABG/DPCT-2
Tinker Air Force Base,
Oklahoma 73145
(Tel. 405-734-7266)

COL Bobby Knapp
DSC/P
Tinker Air Force Base,
Oklahoma 73145
(Tel. 405-734-2856)

Dr. Francis Tuttle, Director
Oklahoma State Dept. of Vocational
and Technical Education
1515 W. 6th Avenue
Stillwater, Oklahoma 74074
(Tel. 405-377-2000)

Tinker AFB and the Oklahoma State Department of Vocational and Technical Education have a unique arrangement to meet the training needs of the Directorate of Maintenance. Formalized training programs are established for journeyman employees. These programs of two years in duration consist of classroom training, on-the-job training, and work experience. The first 3-6 months of the program involves training conducted through State Voc-Tech resources. Training for the remaining months is conducted in-house by OJT instructors and lead journeymen. Promotion progression is from the entry level WG-3, to the intermediate level, then to the journeyman level. Candidates for the programs are selected from both an on-base register and the off-base Office of Personnel Management register. To date, training programs have been established for 7 skills: machine tool operator, sheetmetal mechanic, hydraulic mechanic, aircraft engine repairer, aircraft mechanic, aircraft electrician, and aircraft electronics technician. During the next five years it is the intent of the Directorate of Maintenance to place 1,071 people into training programs for the above skill areas.

Because Tinker has such a large requirement, space for training was not available within the vocational technical system. In support of the Maintenance Technical Training Program, a Vocational Technical Training Center was established on-base. A Memorandum of Agreement between the State Department of Vocational and Technical Education and Tinker AFB made the State responsible for the interior construction and Tinker AFB responsible for any exterior construction of the building housing the center. The precedent setting aspect of this venture is the cooperation between and State and Federal government which allows the use of Tinker AFB property to house a voc-tech facility for training government employees.

Funding: State and Federal.

Information: For further information contact presenters.

Project Title: Red River Army Depot After-Hours Self Development Program

Presenters:

William Goff
Employee Development Specialist
Red River Army Depot, DoD
ATTN: SDSRR-AC-TD
Texarkana, Texas 75507
(Tel. 214-883-2629)

David Mueller
Associate Dean of Instruction, Occupational/Technical Programs
Texarkana Community College
2500 W. Robinson Rd.
Texarkana, Texas 75503
(Tel. 214-838-4541)

Michael Johnson
Personnel Supervisor
Red River Army Depot, DoD
Attn: CFDW-SDSRR-AC
Texarkanua, Texas 75501
(Tel. 214-838-2629)

Carl W. Nelson
President
Texarkana Community College
2500 W. Robinson Road
Texarkana, Texas 75503
(Tel. 214-838-4541)

Project Summary: This session presented a method through which Red River Army Depot (RRAD) provides employees a self-development opportunity in the mechanics and electronics fields. The Depot, in cooperation with Texarkana Community College (TCC), developed two 63 semester hour training programs, a heavy equipment mechanic training program and the electronic technology program. The training is given at the depot during non-duty hours by TCC with Depot furnished facilities, equipment and tools. The college provides and pays instructors and the students pay a reduced tuition and furnish books and related materials. In instances where training is directly related to an employee's job, the Depot provides tuition support. Employees may take individual courses or complete the entire 63 semester hour program which leads to an Associate in Science Degree. These programs are providing a better supply of applicants and improving on-the-job performance of those employed in the mechanics and electronics fields.

Funding: Federal and State.

Information: For further information contact presenters.

Project Title: Puget Sound Naval Shipyard After Hours Program

Presenters:

Rod McIntyre
Apprentice Program Administrator
Puget Sound Naval Shipyard
Bremerton, Washington 98314
(Tel. 206-476-2745)

Duane Carlton
Associate Dean of Instruction
Olympic Community College
16th & Chester
Bremerton, Washington 98310
(Tel. 206-478-4545)

CPT Roger Horne, USN
Shipyard Commander
Puget Sound Naval Shipyard
Bremerton, Washington 98314
(Tel. 206-476-3161)

Dr. Henry M. Milander
President
Olympic Community College
16th & Chester
Bremerton, Washington 98310
(Tel. 206-478-4545)

Project Summary: The Puget Sound Shipyard in conjunction with Olympic Community College has provided a comprehensive after-hours, off-duty time self-development program for the past 31 years. The shipyard provides facilities and equipment and pays student tuition fees. The college provides certified college/vocational instructors and accrediation towards an Associate in Technical Arts Degree. The courses include remedial mathematics and English, supervision and management, engineering, and a wide variety of vocational trades such as blueprint reading or computer programming. This relationship has provided better qualified applicants, upward mobility opportunity, and a higher skill level among participating employees.

Funding: Federal and State.

Information: For further information contact presenters.

V. DEPARTMENT OF DEFENSE RESERVE MILITARY FORCES

Overview

Collaborative efforts between vocational education and the reserve military can be productive for both. Specific job skill training of reservists improves the readinesss of reserve units. Since the civilian occupations of reservists are likely to parallel their military occupations, the reservists' civilian job skills may be increased, the local industrial base enhanced, and the economy of the community furthered.

Reserve unit readiness is a function of both equipment and trained personnel. Some of the newer systems that the services are now using or expect to use in the future require considerable technical sophistication by system operators or users. As the reserve forces begin to use these systems, the problem of the active forces in maintaining highly trained soldiers to work on complex equipment will be repeated in the reserve forces.

The missions of units in the reserve forces vary. For example, a large percentage of reserve units are combat support units while a larger percentage of guard units are combat units. Guard and reserve units rely heavily on being able to attract already trained personnel to the unit. Units can send personnel to formal military schools for the requisite skills training. At issue is the fact that the number of reserve training spaces and funds to pay the guard or reservist while attending school are limited. In addition, some military schools last three or more months and reserve personnel may be reluctant to leave a job or family for those periods of time.

Vocational education schools are an important alternative to military training. Contracts with vocational education schools for training are affected by several requirements. First, the curriculum must be related to the military occupation and the training objectives need to be clearly defined. Next, the vocational curricula may need to be tailored to fit the military setting.

Class location and cost are other factors which must be considered. Locating classes close to the unit site facilities allows close contact between the unit and the school. The unit commander is better able to supervise unit personnel as well as evaluate the instruction. Because the objective of contracting with vocational education schools for technical training is to obtain the best training possible at the least cost, the costs for the training must not exceed the costs of similar training for civilians.

There are many examples of collaborative efforts between vocational education and the reserve military forces which could be cited. Those described below include an example of a unit receiving training from a vocational education school and providing additional job skill training for vocational education students. The Alabama State Community College system sponsors a licensed practical nurse (LPN) program which Army National Guard personnel have attended at eight sites throughout the state. Hanna Harrison Career School of Nursing in Washington, D.C. provides LPN training for an Army Reserve unit through a contract. Lastly, the New Jersey Department of Education was able to provide training on emissions standards for Air National Guard members. The abstracts of these programs follow.

Case Studies - DoD Reserve Military Forces

Project Title: Air National Guard Training of Motor Vehicle Maintenance Personnel in Emission Systems Diagnosis

Presenters:

Mr. Leon J. Colavita
Director, School and Industry Coordination
New Jersey Department of Education
225 West State Street
Trenton, New Jersey 08625
(Tel. 609-292-6325)

LTC John H. Williams
Deputy Commander, Maintenance
National Guard Bureau
201 Woodcrest Avenue
Absecon, New Jersey 08201
(Tel. 609-646-2412)

Project Summary: The program has grown out of an existing cooperative relationship between the Air National Guard and the New Jersey Department of Education. In the summer of 1982 full time Guardsmen were trained in the area of ground vehicle maintenance at Pomona Air Force Base in Pomona, New Jersey. Training costs for the Guard were low as the State provided the course instructor. The State Department of Education considers this program successful and hopes to include the Army National Guard in similar activities in the future.

Funding: The State pays the salary of the course instructor.

Information: For further information, contact either LTC John H. Williams (see above) or

Dick Van Gulik
Director, Trade and Industrial Education
Vocational Division
CN500
Trenton, New Jersey 08625
(Tel. 609-292-6570)

Wes Pfeiffer
Supervisor, Trade and Industrial Education
Vocational Division
CN500
Trenton, New Jersey 08625
(Tel 609-292-6565)

Project Title: The Marine Corps Reserve Contract Civilian MOS Training Support Program

Presenters:

Mr. Ronald Torp
Director of Career Training Center
Career Training Center
1010 S. Gratiot
Mt. Clemens, Michigan 48043
(Tel. 313-468-9685)

MAJ Dennis Verzera, USMC
Executive Officer
Marine Wing Support Group--47
Naval Air Facility
Selfridge AFB
Detroit, Michigan 48045
(Tel. 313-949-5456)

Project Summary: The Career Training Center in Mt. Clemens, Michigan provides MOS related vocational education training under contract with a Marine Corps Reserve Unit in Detroit, Michigan. The vocational curriculum is customized to contribute directly to the reservist's ability to perform duties required by his billet. Recent courses provided under contract are Diesel Mechanics and Electrical Repair Training.

Funding: U.S. Marine Corps Reserve Contract.

Information: For further information contact presenters listed above.

Project Title: Army National Guard Medical Personnel Training

Presenters:

Wayne B. Boteler
Dean of Students
Shelton State Technical College
Tuscaloosa, Alabama 55404
(Tel. 205-556-1144)

COL Richard J. Sims, ARNG
Chief of Plans, Operations & Training
Alabama National Guard
Montgomery, Alabama 36036
(Tel. 205-584-7743)

Project Summary: The Shelton State Technical College and the Alabama Community Colleges provide Licensed Practical Nurse (LPN) training under contract with the Alabama National Guard to train 91C medical personnel for the Guard units. Guard personnel are put on active duty for the period of training. In-depth training and clinical experiences are provided in a wide range of medical, nursing, and allied health skills. Graduates of the accredited LPN Program take the State Board Exams and become Licensed Practical Nurses.

Funding: Alabama National Guard Contract.

Information: For further information contact presenters listed above.

Project Title: U.S. Army Reserve Medical Training for Licensed Practical Nursing

Presenters:

Jane Town
Director of Practical Nurse Program
Hanna Harrison Career School of Nursing
4470 McArthur Blvd.
Washington, D.C. 20007
(Tel 202-333-3500)

Anne K. Milkes
Executive Director
Hanna Harrison Career School of Nursing
4470 McArthur Blvd.
Washington, D.C 20007
(Tel. 202-333-3500)

COL Julius D. Pantalome, USA
First Army Medical Advisor
Ft. Meade, Maryland 20755
(Tel. 301-923-3024)

Project Summary: The Hanna Harrison Career School of Nursing provides Licensed Practical Nurse (LPN) training under contract with the 2290th Army Reserve Unit to train 91C medical personnel for the unit. Reserve personnel are put on active duty for the period of training. In-depth training and clinical experiences are provided in a wide range of medical, nursing and allied health skills. Graduates of the accredited LPN Program take the State Board Exams and become Licensed Practical Nurses.

Funding: Army Reserve Contract.

Information: For further information contact presenters listed above.

VI. DEPARTMENT OF DEFENSE MILITARY ACCESSIONS

Overview

The recruiting objective for the DoD is to recruit the quantity and quality of people needed to staff the force. Recruiting objectives are also established for each category of personnel: males, females, prior service, and non-prior service. Certain minimums regarding proportion of non high school graduates are also specified.

In fiscal year 1981, the services achieved 101% of their recruiting goals. Data on the number of high school graduates entering the service indicate that all services recruited a higher proportion of high school graduates than were found in the national youth population. Continued availability of trained or trainable personnel (such as high school graduates) is critical to defense preparedness and efforts to modernize weapons systems, such as force modernization, are affected. A central problem of force modernization is that increasingly complex systems require increasingly greater numbers of technically sophisticated, highly trained personnel. Although high school graduates have the potential to be trained and to contribute to force modernization, if the services could attract individuals who already have technical training, the task of force modernization would be simplified.

One important contribution vocational education can make to military training and defense preparedness is to assist in identification and recruitment of technically trained, high school graduates. Vocational education instructors can work with active duty and reserve/national guard recruiters to provide students information on job and career opportunities in the DoD. One way of providing information is for schools to schedule recruiters' visits during the year and during special events such as career day. Another method involves organizing and disseminating information to students or counselors via handbooks or guides. These coordination efforts would be facilitated by clear, documented military and civilain occupational information. Project Crosswalk, described in one of the following abstracts, will produce a guide linking occupational information between both.

In some career areas, experimental programs exist to test the feasibility of a lateral entry program to award civilian technical school/program graduates rank. One aspect of the Navy experiment involves a job skill test which tests prospective service members' grasp of non-military technical material. Applicants who score well on the test are allowed to enter the Navy in pay grades 4 through 6 (these grades usually are attained only after four or more years of service). This program is summarized in the abstracts which follow.

Some individuals who enter the service do not have the basic reading and mathematical skills needed to do well in technical training. As mentioned previously, basic skills training is another area in which opportunities for cooperation between the DoD and the vocational education community exist. The Army Basic Skills Education Program (BSEP) is also planned to help service members improve skills in reading, writing, mathematics, and speaking. The program is administered Army-wide but actual services are handled locally and delivered through community colleges and local education agencies on a contractual basis.

Case Studies: Military Accessions

Project Title: Department of Defense Military Accessions - Needs Assessment

Presenter:
Dr. W. S. Sellman
Deputy Director for Accession Policy
Office of Assistant Secretary of Defense
Manpower, Reserve Affairs and Logistics
The Pentagon, Room 2B271
Washington, D.C. 20301
(Tel. 202-695-5525)

Project Summary: Each year, the Armed Services need to sign up or "hire" approximately 575,000 people: 25,000 officers, 350,000 enlistees for the Active Force and an additional 200,000 people for the Reserves. When the statutory authority for the draft expired in 1973, the United States ended over 30 years of almost continuous compulsory military service. With the advent of the all-volunteer force, the focus of military personnel planners shifted from retaining trained personnel to enlisting qualified youth. Today the principal market for military recruiting activities is the high school graduate. For enlisted personnel purposes, DoD studies consistently have demonstrated that high school graduates are more likely to successfully complete their term of enlistment than are nongraduates. High school graduate enlistees have an 80 percent completion of tour record compared to 60 percent for nongraduates. In addition, those studies have shown that high school graduates are more likely to reenlist and to advance in rank. To date, the Armed Services continue to meet all volunteer force recruiting objectives and quotas, but DoD must compete in the civilian employment and educational markets for these youth, and it is to be noted that while the supply of quality recruits is going down the demand is going up. The major question is how do these two factors come together. The vocational education training community can play a major role in helping to alleviate this disparity.

Questions to be answered by the Recruiting Services and the vocational/technical institutions include: (1) what must be done to improve recruiting practices in vocational education schools so that they will be approached with the same level of sophistication that is demonstrated in high schools and colleges? (2) who should do this recruiting? (3) what additional assets would be required to effectively recruit vocationally trained students? (4) what policies or code of ethics should be developed by the military and vocational educator to establish the ground rules for recruiting?

Decisions must be made by the military as to what concessions or advantages they are willing to offer graduates of vocational training courses similar to the advanced pay grades offered for college credit.

Funding: Federal.

Information: For further information contact presenter.

Project Title: Project Crosswalk: Linking Military and Civilian Occupational Information

Presenter:
Dr. Anita Lancaster
Program Manager
Directorate for Accession Policy
Office of Assistant Secretary of Defense
Manpower, Reserve Affairs and Logistics
The Pentagon, Room 2B269
Washington, D.C. 20301
(Tel. 202-697-9267)

Project Summary: The purpose of this project is to develop a system that will provide a macro level data base to aid in manpower strategy planning; demand and supply career information; training and job opportunities from school, State and military sources; and critical skills identification for mobilization planning. The first step in developing the system was the need to design and implement a "cross-walk" between military occupations data and the data of existing civilian occupational classification systems. Accomplishment of the objective centers on the development of a master occupational speciality computer data tape that cross references all military occupational specialities of the Army, Navy, Air Force, Marine Corps, and Coast Guard with the civilian occupational specialties and 9-digit codes found in the Dictionary of Occupational Titles (DOT). The development of the Military-Civilian Occupational Information Crosswalk master tape will be the basis from which the military occupational specialty package and the Military-Civilian Occupational Source Book will be developed.

Funding: DoD.

Information: For further information contact presenter listed above.

Project Title: DoD/Department of Education Joint Research and Development Project Pre-Vocational Instruction for Lower Aptitude Navy Recruits

Presenters:
Dr. Ed Aiken
Program Director
Career Development and Retention
Navy Personnel Research and Development Center, Code 15
San Diego, California 92152
(Tel. 714-225-2371)

Project Summary: The Navy, like the other services, uses a battery of aptitude and achievement tests to set qualification standards for entry into its technical training schools. However when career manpower shortfalls occur, recruits are given waivers from these test score requirements. Job oriented basic skills training (JOBS) was to be tried on recruits who tested below the maximum waivered limit for school entry. They were to be recruits who, all else being equal, would be predicted to fail Navy vocational technical training in large numbers.

The specific aim of JOBS was to provide pretechnical training on those knowledges and skills which a curriculum analysis indicated were prerequisite to the technical training provided in selected Navy schools. Since there were a larger number of prerequisites than time in which to to teach them, classifiers selected only those where very large differences between JOBS and school qualified recruits were found. The teaching time allotted was driven by the projected benefits. In other words, the dollars saved had to clear the costs of the training. For purposes of the research, that was predicted to be in the range of 4-8 weeks per course.

What were the results to be discerned from the data and analyses performed to date on the JOBS project test and evaluation? First, it would seem that DoD could, with a modest investment in carefully targeted prevocational training, get a good deal more skilled performance out of some of its lower aptitude recruits than it does at present. As a bonus, the data indicate that after they are trained, the JOBS type student shows a higher degree of institutional loyalty. Also, because JOBS students are over-represented by Amercia's racial and ethnic minorities, getting them into skilled labor categories contributes to the goal of distributing minority personnel more evenly across the vocational and technical occupations found in the Navy. On the other hand, it can be argued that in today's very favorable recruiting market, compensatory training programs like JOBS should not be over emphasized. It was particularly noted that there may still be a cost-effective place for upward mobility programs like JOBS.

Funding: Federal.

Information: For further information contact presenter.

Project Title: Laternal Entry Pilot Study: Issues for Defense and Vocational/Technical Education

Presenters:

Mr. Eugene Sullivan
Assistant Director
Office of Educational Credits and Credentials
American Council on Education
1 Dupont Circle
Washington, D.C. 20036
(Tel. 202-833-4686)

Dr. Meryl Baker
Supervisory Personnel Research Psychologist
Navy Personnel Research and Development Center, Code 15
San Diego, California 92152
(Tel. 714-225-6911)

Mr. Leon Albert
Director of Evening College
Stark Technical College
Canton, Ohio 44770
(Tel. 216-494-6170)

Project Summary: The Navy Personnel Research and Development Center (NPRDC) is investigating various methods to address the Navy's current and projected shortage of skilled personnel. One such method for increasing both the quality and quantity of such personnel is through the use of lateral entry accessions. Lateral entry means accession into an organization at some point beyond the typical beginning or entry point. Such lateral entry is normally based upon some measurable competencies or experience gained by an individual in the labor market, or, on the training or educational achievement of an individual at a vocational school, technical school or university. Lateral entry into the Navy involves accessing individuals without prior military service at higher paygrades than is normally available to such personnel. As part of NPRDC's investigation of the feasibility of lateral entry, a pilot program was established in 13 ratings for the purposes of validating newly established lateral entry standards and investigating targets. The 13 ratings were: Aviation Electrician's Mate (AE); Aviation Electronics Technician (AT); Electrician's Mate (EM); Machinist's Mate (MM); Storekeeper (SK); Engineman (EN); Hull Technician (HT); Instrumentman (IM); Mess Specialist (MS); Yeoman (YN); Fire Control Technician (FT); Electronics Technician (ET); Machinery Repairman (MR).

Funding: Department of the Navy.

Information: For further information contact presenters.

VII. CONCLUSIONS

Summary Conclusions and Recommendations Made by Presenters

During the last session of the seminar, representatives from each of the five panels, including Defense Related Industrial Base, DoD Active Military Forces, DoD Civilian Employees, DoD Reserve Military Forces and DoD Military Accessions, summarized key points presented during the meetings and outlined future directions. Summaries of the presentations are found below.

Defense Industrial Base

The four projects presented were summarized and four factors common to those successful projects were noted. The four factors were: 1) communication does take place between the educational community and industry; 2) the projects exemplified a commitment to funding and getting the job done; 3) mutual trust is a key ingredient to cooperative efforts; and 4) the potential for educational assistance is clear.

DoD Active Military Forces

The four demonstration projects presented during the seminar were described and the Active Forces representative made two observations. First, the mechanisms which would permit cooperative efforts already exist and are in place. Second, the needs of the services are tied directly to their primary missions; and because the missions of each differ and the specific, local needs of any command within a service may differ, cooperative efforts must be identified and implemented at a local level.

The following conclusions were stated. First, military participants felt the program was worthwhile and appropriate distribution of seminar proceedings would be useful. Second, although the services generally meet their training needs now, opportunities exist for collaborative efforts. Third, the services' need for basic or remedial skills (i.e., literacy) training has and can continue to be augmented from outside sources. Lastly, efforts of units to modernize may result in previously unidentified technical training requirements.

DoD Civilian Employees

Several recommendations were made during the session. They were, first, initiate formal exchanges of information at the regional level. Second, foster both formal and informal efforts to share materials, tools, and training. Next, identify DoD-Voc Ed contact points and establish a mechanism to accomplish recommendations. Lastly, the American Vocational Association should include a session on defense preparedness at their next meeting and at the next state directors' meeting.

DoD Reserve Forces

The projects presented during the seminar were briefly reviewed. Seven critical elements necessary for joint vocational education reserve activities were cited. These were communication, commitment, trust, understanding, assistance, cooperation, and flexibility. No specific recommendations were made.

DoD Military Accessions

Some recommendations were made and some questions were posed. The recommendations were: (1) maintain a "can do" attitude; (2) develop a DoD-Voc Ed directory of key decision makers; (3) continue the dialogue between policy makers, researchers, and practioners; and (4) support the Lateral Entry Accessession and Crosswalk programs.

The questions to be answered were: (1) How can recruiting at facilities with vocational educational programs be facilitated? (2) What information is needed in order for the services to be more effective in recruiting vocational education graduates? (3) What policies are needed to carry out the recruiting effort? and (4) What technical training alternatives exist for active duty personnel?

Other Roles for Vocational Education

Collaboration

Although no additional funds are or will become available for vocational training as a result of these initiatives, vocational directors can be proactive in seeking out opportunities for collaboration. Because contracting authority for local training has been delegated to local military installation commanders, educators must ascertain what local training needs are in order to develop programs and proposals for funding. One example of outstanding collaboration with industry was reported in Orange County, California. There, the community colleges were able to contract for specific training with Air California, Farwest Industries, General Motors, Hughes Aircraft, and ITT Cannon. Some 2,600 employees received apprenticeship training on a contractual basis with those colleges. Other examples of collaborative efforts were illustrated in the text of this report.

Outreach

Many vocational institutions have developed an effective outreach capability. Essentially, this enables an educational institution to send an instructor to a military base, reserve center, industry, etc. to conduct the training where the students are located. This activity occurs within many existing adult and vocational programs but can be strengthened and expanded.

Greater Use of Facilities and Resources

Annually new vocational facilities are constructed, equipment and films purchased, and curricula guides prepared. Opportunities abound to increase their usage not only within the vocational education community, but also for a number of defense oriented corporations and agencies. The potential exists for scheduling programs during evenings, weekends, or even summers for personnel unable to participate in daytime training. One example indicating how vocational facilities could be used on weekends was reported in Maine. The state education agency, in that instance, was instrumental in developing linkages between the Army National Guard and a vocational school. Approximately 500 personnel from an engineer battalion participated in construction training during weekend scheduled training assemblies. The National Guard benefitted from this cooperative endeavor as did the vocational school, instructors, and the community at large.

Participant Feedback

Seminar participants were requested to complete a two-part, open-ended questionnaire at the conclusion of the conference. Ninety-one questionnaires were returned representing a 31% rate of return. Of the ninety-one, approximately 29% (26) were submitted by attendees from the military sector. The remaining number, approximately 71% (65), represented attendees from the civilian sector.

A number of suggestions were made in the questionnaire's comment section. These responses fell into two general categories: (1) those that were concerned with the conduct of the Seminar and (2) the remainder which addressed broad generalizations, specific ideas, or activities.

The most frequent comments about the Seminar concerned "ready availability" of the proceedings and "obtaining a list" of participants. Broad-scale publicity about the Seminar and the suggestion "to conduct a national conference annually" were the second most frequently mentioned ideas. Several respondents recommended that a survey of participants be conducted within six months for the purpose of determining follow-up activities or actions that could be attributed to the Seminar.

Suggested follow-up activities fell into four categories. The first, Federal leadership and coordination, concerned actions that need to be taken by the Departments of Education and Defense. One suggestion was to create a Federal level "Task Force" or "Coordinating Committee" to provide leadership and coordination. The need for "reliable information" and "easily accessible" data on skill shortage military needs were also frequently mentioned.

The second group of suggestions was specifically directed to information exchange. Some urged that stronger communication lines between the military, civilian and defense industrial bases be established. Better ways to exchange information were suggested. These included establishment and distribution of: (1) a directory of education personnel, schools, and resources; (2) a directory of military personnel, military installations and other resources; and, (3) a newsletter.

Suggestions were also made regarding recruitment ideas and procedures. These comments generally concerned new ways for the military services to work with the vocational education community. Specifically mentioned were the following: (1) lateral-entry based upon technical training credit, (2) pre-induction support based on future involvement with the military, and, (3) comprehensive career development that includes an emphasis on the K-12 level and on counselor training.

Still another category of suggestions concerned the specific recommendation to work with advisory councils. Suggestions ranged from adding a military representative to the National Advisory Council on Vocational Education (NACVE) to the establishment of special military/education advisory councils at the state level.

APPENDIX A

SEMINAR AGENDA

Wednesday, September 29, 1982

OPENING RECEPTION 6:00 - 6:45 PM

PRESENTATION OF THE COLORS 7:00 - 7:15 PM

Color Guard - Military District of Washington, DC

DINNER 7:15 - 8:30 PM

KEYNOTE ADDRESS: 8:30 - 9:15 PM

WELCOME : The Honorable Robert M. Worthington

INTRODUCTION : The Honorable Lawrence J. Korb

KEYNOTE SPEAKER: The Honorable Frank Carlucci

Thursday, September 30, 1982

GENERAL SESSION 8:00 - 9:00 AM

CHAIR : The Honorable Robert M. Worthington

OPENING REMARKS: The Honorable T.H. Bell

PRESENTATION : CAPABILITIES OF THE VOCATIONAL EDUCATION COMMUNITY
Dr. Gene Bottoms

PANEL SESSIONS

SESSION I - NEEDS ASSESSMENT 9:15 - 10:30 AM

A. Defense Related Industrial Base

MODERATOR : Hugh Bradley

PRESENTERS: Richard Donnelly, David L. Blond, Paul F. Pothin

RECORDER : George Saunders

B. DoD Active Military Forces

MODERATOR : COL William A. Scott, USA

PRESENTERS: LTC Clinton L. Anderson, USA, CAPT Douglas H. Sommer, USN, William S. Neal, USAF, MAJ Donald C. Sheehan, USMCR

RECORDER : Dr. Glenn C. Boerrigter

24-25

C. DoD Civilian Employees

MODERATOR : Richard J. Schnurr

PRESENTERS: John Hartigan, Joseph Moore, Luke McDaniel

RECORDER : Dr. Carroll F. Towey

D. DoD Reserve Military Forces

MODERATOR : COL Lloyd Johnson, USAF

PRESENTERS: MGEN Herbert R. Temple, ARNG, MAJ Donald Sheehan, USMCR,
COL Wilbert T. Stewart, ANG, COL William J. Lumpkins, USAR

RECORDER : Donald H. Snodgrass

E. DoD Military Accessions

MODERATOR : Dr. W.S. Sellman

PRESENTER : Dr. W.S. Sellman

RECORDER : Dr. Paul Manchak

COFFEE BREAK 10:30 - 10:45 AM

SESSION II - CASE STUDIES

A. Defense Related Industrial Base

PROJECT TITLE - Improving Skills of Tradesmen in Shipbuilding Industry

MODERATOR : Hugh Bradley

PRESENTERS: Travis Cliett, Mickey Davenport

PANELISTS : William A. Edward, Dave Meyer

RECORDER : George Sanders

B. DoD Active Military Forces

PROJECT TITLE - Military Readiness: Education and Vocational Training at Fort Bragg, North Carolina

MODERATOR : COL George Bailey, USA

PRESENTERS: Raymond E. Gatti, Dr. William A. Edmundson

PANELISTS : MSG Kenneth L. Nelson, USA, William Reilly

RECORDERS : Louise Ellis, Dr. Glenn C. Boerrigter

C. DoD Civilian Employees

PROJECT TITLE - Puget Sound Naval Shipyard After-Hours Program

MODERATOR : Luke McDaniel

PRESENTERS: Duane K. Carlton, Roderick McIntyre

PANELISTS : Richard A. Hines, Walter Wimer

RECORDER : Dr. Carroll F. Towey

D. DoD Reserve Military Forces

PROJECT TITLE - Army National Guard Medical Personnel Training

MODERATOR : COL Ed Remiszewski, ARNG

PRESENTERS: Wayne B. Boteler, COL Richard J. Sims, ARNG

PANELISTS : LTC Erwin F. Clements, ARNG, Dr. Elwood Padham

RECORDER : Donald H. Snodgrass

E. DoD Military Accessions

PROJECT TITLE - DoD/Department of Education Joint Research and Development Project Pre-Vocational Instruction for Lower Aptitude Navy Recruits

MODERATOR : Dr. W.S. Sellman

PRESENTERS: Dr. Ed Aiken

PANELISTS : LCDR Kathleen O'Brien, Dr. Donald M. Brill

RECORDER : Dr. Paul Manchak

LUNCH 12:15 - 1:30 PM

SESSION III - CASE STUDIES

A. Defense Related Industrial Base

PROJECT TITLE - Rockwell International Project

MODERATOR : Hugh Bradley

PRESENTERS: Jack Ellis, Dave Meyer

PANELISTS : Elwin G. Wheat, Mickey Davenport

RECORDER : George Sanders

B. DoD Active Military Forces

PROJECT TITLE - Job Oriented Basic Skills Training in the U.S. Navy

-Navy Technical Training Center, Meridian, MS
-Early Research for the JOBS Program
-Naval Aviation Technical Training Center, Memphis, TN

MODERATOR : LCDR Kathleen O'Brien

PRESENTERS: K. Irby, Dr. E.G. Aiken, D. Fiene, Dr. N.N. Kerr

PANELISTS : CDR W. Losa, USN, Walter E. Muller

RECORDERS : CDR D. Seykowski, USN, Dr. Glenn C. Boerrigter

C. DoD Civilian Employees

PROJECT TITLE - Red River Army Depot After-Hours Self Development Program

MODERATOR :. Luke McDaniel

PRESENTERS: David Mueller, Dr. Michael Johnson, William Goff

PANELISTS : Jacqueline J. Cody, Dr. William A. Grusy

RECORDER : Dr. Carroll F. Towey

D. DoD Reserve Military Forces

PROJECT TITLE - U.S. Army Reserve Medical Training for Licensed Practical Nursing

MODERATOR : MAJ Bruce W. Morrow, USAR

PRESENTERS: Jane Town, Anne K. Milkes, COL Julius D. Pantalone, USA

PANELISTS : LTC Jeanette D. Kraska, USA, Dr. David S. Gailey

RECORDER : Donald Snodgrass

E. DoD Military Accessions

PROJECT TITLE - Lateral Entry Pilot Study: Issues for Defense and Vocational/Technical Education

MODERATOR : Dr. Anita Lancaster

PRESENTERS: Eugene Sullivan, Dr. Meryl Baker, Leon Albert

PANELISTS : MAJ James E. Watson, USAF, Kenneth Swatt

RECORDER : Dr. Paul Manchak

COFFEE BREAK 2:45 - 3:00 PM

SESSION IV - CASE STUDIES

A. Defense Related Industrial Base

PROJECT TITLE - Pratt and Whitney Program

MODERATOR : Hugh Bradley

PRESENTERS: Dr. Elwood A. Padham, Dana Darling, John M. Lyman

PANELISTS : D. Massengale, William Harnett

RECORDER : George Sanders

B. DoD Active Military Forces

PROJECT TITLE - Community College of the Air Force

MODERATOR : LTC Bobby P. Tindell, USAF

PRESENTERS: LTC William C. Flinn, Jr., USAF

PANELISTS : MAJ Douglas E. Testermen, USAF

RECORDER : CPT Richard G. Howson, USAF, Dr. Glenn C. Boerrigter

C. DoD Civilian Employees

PROJECT TITLE - Tinker Air Force Base Vocational Technical Training Program

MODERATOR : Luke McDaniel

PRESENTERS: John V. Provence, Jacqueline J. Cody, Dr. Francis Tuttle

PANELISTS : William Goff, Clarence M. Green

RECORDER : Dr. Carroll F. Towey

D. DoD Reserve Military Forces

PROJECT TITLE - U.S. Marine Corps Reserve-Diesel Mechanic/Electrical Repair Training program, Mt. Clemens, Michigan

MODERATOR : LTC Regan Wright, USMC

PRESENTERS: Mr. Ronald Torp, MAJ Dennis Verzera, USMC

PANELISTS : MAJ Paul Farmer, USMC, Dennis E. Davis

RECORDERS : CPT Robin L. Higgins, USMC, Donald H. Snodgrass

E. DoD Military Accessions

PROJECT TITLE - Project Crosswalk: Linking Military and Civilian Occupational Information

MODERATOR : Dr. W.S. Sellman

PRESENTERS: Dr. Anita Lancaster

PANELISTS : L.A. Roberton, Russell B. Flanders

RECORDER : Dr. Paul Manchak

BREAK 4:15 - 4:30 PM

SESSION V - CASE STUDIES

A: Defense Related Industrial Base

PROJECT TITLE - Bendix Corporation Program

MODERATOR : Hugh Bradley

PRESENTERS: Jessie Burt, William Harnett

PANELISTS : Dr. Francis Tuttle, Ed Word, Dana Darling

RECORDER : George Sanders

B. DOD Active Military Forces

PROJECT TITLE - U.S. Marine Corps AC-Delco Corporation; Technical Training Program

MODERATOR : LTC Regan A. Wright, USMC

PRESENTERS: Milton Weatherhead, LTC Peter B. Southmayd, USMC

PANELISTS : LTC Jack W. Carter, USMC

RECORDER : Dr. Glenn C. Boerrigter

C. DoD Civilian Employees

PROJECT TITLE - Professional Development Program for Defense Depot Memphis Employees

MODERATOR : Luke McDaniel

PRESENTERS: Carol McAuliffe, Richard A. Hines

PANELIST : Dr. J. Richard Gilliland

RECORDER : Dr. Carroll F. Towey

D. DoD Reserve Military Forces

PROJECT TITLE - Air National Guard Training of Motor Vehicle Maintenance Personnel in Emission Systems Diagnosis

MODERATOR : COL Bruce R. LaForce, USAF

PRESENTERS: Leon J. Colavita, LTC John Williams

PANELISTS : COL Wilbert T. Steward, ANG, William Reilly

RECORDER : Donald H. Snodgrass

E. DoD Military Accessions

PROJECT TITLE - Lateral Entry Pilot Study: Issues for Defense and Vocational/Technical Education

MODERATOR : Dr. Anita Lancaster

PRESENTERS: Eugene Sullivan, Dr. Meryl Baker, Leon Albert

PANELISTS : MAJ James E. Watson, USAF, Kenneth Swatt

RECORDER : Dr. Paul Manchak

EVENING SESSION 6:00 - 6:45 PM

RECEPTION

DINNER 7:00 - 8:00 PM

REMARKS: The Honorable Lawrence J. Korb,
The Honorable Robert M. Worthington

Friday, October 1, 1982

GENERAL SESSION 8:30 - 10:30 AM

THE ORANGE COUNTY TECHNOLOGY RESOURCE CENTER: A UNIQUE PUBLIC-PRIVATE SKILLS TRAINING ENTERPRISE

CHAIR : The Honorable Robert M. Worthington

PRESENTERS: Kathy Lusk, COL James F. Young, USAF, William B. Turner

COFFEE BREAK 10:30 - 10:45 AM

PANEL REPORTS 10:45 - 12:30 PM

PRESENTATION AND DISCUSSION OF SUMMARY CONCLUSIONS AND RECOMMENDATIONS

CHAIR : The Honorable Robert M. Worthington,
The Honorable Lawrence J. Korb

CLOSING REMARKS, LUNCH 12:30 - 1:30 PM

APPENDIX B

LISTING OF PARTICIPANTS, PRESENTERS, AND PLANNING COMMITTEE AT THE VOCATIONAL EDUCATION AND DEFENSE PREPAREDNESS SEMINAR

Ray Adcock
Director
Dept. of Econ. & Comm. Dev.
1748 Forrest Dr.
Annapolis, MD 21401
(301) 269-2631

Ed Aiken
Program Director
Navy Pers. R&D Ctr. Code 15
San Diego, CA 92152
(714) 225-2371

Leon H. Albert
Director of Evening College
Stark Technical College
6200 Frank Ave., NW
Canton, OH 44720
(216) 494-6170 Ext. 225, 249

LTC Clinton L. Anderson, USA
Education Directorate
The Adjutant General's Office
Headquarters Dept. of the Army
Alexandria, VA 22331
(703) 325-9800

Jim Athen
Iowa Dept. of Public Instruction
Grimes State Office Bldg.
Des Moines, IA 50319
(515) 281-4700

Jim Auerbach
Staff Representative
AFL-CIO Dept. of Education
815 16th St., NW
Washington, DC 20006
(202) 637-5144

LTC John P. Aymond, Jr., USMC
Hd., HQMC
U.S. Marine Corps
12621 Yardarm Pl.
Woodbridge, VA 22192
(202) 699-1249

Meryl S. Baker
Supervisory Pers. Res. Psychologist
Navy Pers. R&D Ctr.
Code 15
San Diego, CA 92152
(714) 225-6911

Boyd F. Baldwin
Director, Ind. & Pub. Relations
Boeing
Box 16858
Philadelphia, PA 19142
(215) 522-2233

COL George Bailey, USA
Director of Education
The Adjutant General's Office
State Educ. Bldg. West
Alexandria, VA 22331
(703) 325-9800

Dr. J. Barry Ballard
State Director, Vocational Educ.
State of Arkansas
Headquarters, Dept. of the Army
Little Rock, AR 72201
(501) 371-2165

MG LeRoy Bartman, USAF
Asst. to Commander ATC for ANG
Air National Guard
520 Roundtree, NE
Ada, MI 49301
(616) 676-0618

Gilberto Belaval
Assistant Director
Office of Policy & Management
80 Washington St.
Hartford, CT 06106
(203) 566-4478

Hon. T.H. Bell
Secretary of Education
Department of Education
400 Maryland Ave., SW
Washington, DC 20202
(202) 426-6420

Bob Bendotti
Business & Industry Liaison
Arizona Dept. of Education
1535 W. Jefferson
Phoenix, AZ 85007
(602) 255-5197

Robert L. Bidwell
Director
Defense Product Engineering Service
% Cameron Station
Alexandria, VA 22314
(703) 756-2331

Richard J. Blair
Owner/Chairman
Colorado Area Tech., Inc.
10851 W. 120th Ave.
Broomfield, CO 80401
(303) 466-1714

David L. Blond
Senior Economist
Office of the Secy. of Defense
The Pentagon, Room 2D27A
Washington, DC 20301
(202) 695-2612

Glenn C. Boerrigter
Chief, Pers. Dev. Branch
Office of Voc. & Adult Ed.
U.S. Dept. of Education
Washington, DC 20202
(202) 245-2617

Wayne B. Boteler
Dean of Students
Shelton St. Community College
Drawer J East Side Station
Tuscaloosa, AL 35404
(205) 556-1144

Donald M. Brill, PhD.
Assistant State Director
Wisc. Bd. Voc. Tech. & Adult Educ.
HFSOB 4802 Sheboygan Ave.
Madison, WI 53716
(608) 266-2449

Mary L. Broad
Asst. Dep. Dir. for Career Dev.
DCA-Defense Comm. Agency-Code 308
8th St. & S. Courthouse Rd.
Washington, DC 20305
(202) 692-2415

Larry Burns
Educational Specialist
Navy Recruiting Command
Wilson Blvd.
Arlington, VA 22203
(703) 696-4889

Jessie Burt
Director, Industrial Services
Department of Education
Tallahassee, FL 32301
(904) 487-1040

Paul G. Butterfield
Div. of Vo. & Tech. Ed.
Weber State College
3750 Harrison
Ogden, UT 84408
(801) 626-6067

M. Douglas Call
Dir. of Comm. Coll./Voc. Educ.
W. Va. Board of Regents
950 Kanawha Blvd. E.
Charleston, VW 25177
(304) 348-2101

Duane Carlton
Assoc. Dean of Instruction
Olympic College
16th & Chester
Bremerton, WA 98310
(206) 478-4545

Hon. Frank Carlucci
Deputy Secretary of Defense
Department of Defense
The Pentagon, Room 3E944
Washington, DC 20301
(202) 695-5352

COL Jacques Carter, USMC
U.S. Marine Corps
HQMC (CODE TD6)
Arlington, VA 22201
(703) 224-4859

Paul Chakonas
Associate in Higher Education
New York State
Education Department
Albany, NY 12830
(518) 474-5705

George A. Clanton
Supervisory Dir. for Ind. & Comm. Rel.
D.C. Public Schools
415 12th St., NW, Room 904
Washington, DC 20020
(202) 724-4178

Leadie M. Clark
Chancellor
N. Orange Cnty. Comm. Coll. District
1000 N. Lemon
Fullerton, CA 92633
(914) 871-4030

LTC Erwin F. Clements, ARNG
Recruiting
Maine Army National Guard
69 Court St.
Augusta, ME 04330
(207) 622-9468

Rick D. Clevette
Mgmt. Dev. Specialist
Honeywell
7625 Metro Blvd.
Edina, MN 55435
(612) 830-3942

Travis A. Cliett
Asst. State Director
Miss. Vocational Ed. Dept.
P.O. Box 771
Jackson, MS 39205
(601) 354-6854

Jacqueline J. Cody
Chief of Training, Tinker AFB
AF Logistics Command/TAFB
2854th ABG/DPCT Tinker AFB
Oklahoma City, OK 73145
(405) 734-5471

Leon Colavita
Director, School Industry Coord.
N.J. Dept. of Education
225 W. State St.
Trenton, NJ 08625
(207) 676-9511 Ext. 2382

Cathy Corp
Assistant Director-PN Program
Hannah Harrison Career School
4470 MacArthur Blvd.
Washington, DC 20007
(202) 333-3500

James C. Craig
Asst. for Special Programs
U.S. Air Force, Dir. of Operations
P.O. Box 444
Randolph AFB, TX 78148
(512) 652-5387

Larry Crane
Associate Director
Miss. Gulf Coast Jr. College
P.O. Box 100
Gautier, MS 39553
(601) 497-4313

Katheryn L. Cranford
Education Specialist
U.S. Marine Corps
HQ MC CTDE
Washington, DC 20380
(202) 694-2115

Lawrence P. Creedon
Superintendent of Schools
Quincy Junior College
Coddington St.
Quincy, MA 02168
(617) 472-6468

Charles Dale
Economist
Army Research Institute
5001 Eisenhower Ave., PTRI-GP
Alexandria, VA 22333
(703) 274-5610

Dana Darling
Supervisor, Training & Education
Pratt & Whitney Aircraft
P.O. Box 455
N. Berwick, ME 03906

John L. D'Aubin
Director
Jefferson Parish Vo. Tech. School
5200 Blair Dr.
Metairie, LA 70001
(504) 733-5250

C.M. Davenport
Mgr., Hourly Empl. & Trng.
Ingalls Shipbuilding
P.O. Box 149
Pascagoula, MS 39567
(601) 935-5102

Dennis Davis
Assistant Superintendent
Kanawha County School
200 Elizabeth St.
Charleston, WV 25311
(304) 348-7756

MG J.L. Day, USMC
Deputy Chief of Staff, Training
Headquarters Marine Corps
Washington, DC 20380
(202) 694-1551

William A. Dennis
Chief, Policy Analysis Staff
Office of Voc. & Adult Education
7th & D Sts., SW
Washington, DC 20202
(202) 472-6572

C.W. "Chuck" Devore
Director, Adult Ext./Comm. Serv.
916 Vo-Tech & State of Minn.
3419 Buckbee Rd.
White Bear Lake, MN 55110
(612) 770-2351

Carl R. Deyeso
Director of Academic Education
Quincy Junior College
Coddington St.
Quincy, MA 02169
(617) 471-0100

Warner Dickerson
Asst. Commissioner for Voc. Educ.
Tennessee
200 Cordell Hull Bldg.
Nashville, TN 37219
(615) 741-1716
(609) 924-1640

Richard L. Dixon
Chief, Career Management Branch
HQ, NAVMAT
Crystal Plaza #5, CNM-01M42
Washington, DC 20360
(202) 692-0515

Richard Donnelly
Director for Industrial Resources
Office of Under Secy. of Defense
for Research and Engineering
The Pentagon, Room 2A330
Washington, DC 20301
(202) 695-7458

Norman A. Dreblow
Apprentice Training Coordinator
Kelly AFB, Texas, SA-ALC
San Antonio, TX 78241
(512) 925-7504

BG C.F. Drenz, USA
DD(AM) Defense Logistics Agency
DLA (Dept. of Defense)
7913 Jansen Dr.
Springfield, VA 22152
(703) 274-9170

Harry N. Drier
Associate Director
Natl. Ctr. for Research in Voc. Educ.
1960 Kenny Rd.
Columbus, OH 43210
(614) 486-3655

R. Douglas Dupp
Asst. to the Commissioner
Conn. St. Bd. of Education
165 Capitol Ave., St. Off. Bldg. #308
Hartford, CT 06106
(203) 566-2137

Ellen Dutton
Consultant
Council of Developing Institutions
49 Wilton St.
Princeton, NJ 08540

Louis R. Dworshak
Director, Intl. Bus. & Indust. Trng.
Vermont Dept. of Economic Development
Pavilion Office Bldg.
Montpelier, VT 05602
(802) 828-3221

Joseph Dzurenda
Program Specialist
U.S. Dept. of Education
3535 Market St.
Philadelphia, PA 19101
(215) 596-6476

Kenneth W. Eaton
Coordinator, Bus., Ind., Govt. Trng.
State Technical Institute
5983 Macon Cove
Memphis, TN 38134
(901)

William A. Edmundson
Education SER Office
HQ XVIII Airborne Corps, Ft. Bragg
McComb & Armstead
Fort Bragg, NC 28307
(919) 396-2009

Will Edwards
Coord. Services to Bus. & Industry
West Va. Dept. of Ed./Bur. of Vo-Tech
Room 221 Bldg. 6, Capitol Complex
Charleston, WV 25305
(304) 348-6317

COL Richard W. Elder, USAF
Dpty. Dir. AF/MPX
The Pentagon
Washington, DC 20330
(202) 697-5222

Dave Eldridge
Manager, Manpower Resources Div.
S.C. State Development Board
P.O. Box 927
Columbia, SC 29202
(803) 758-2337

Jack R. Ellis
Industrial Training Supervisor
State of Ohio
65 S. Front St., Room 904
Columbus, OH 43215
(614) 239-2786

Louise D. Ellis
Education Program Administrator
HQDA (DAAG-ED)
Alexandria, VA 22331
(202) 325-9800

Nancy K. Ellis
Special Asst. for Communications
Office of the Secretary of Defense, EO
3189 Readsborough Ct.
Fairfax, VA 22031
(703) 280-1447

Dr. Philip J. Erdle
President
Natl. Education International
4361 Birch St.
Newport Beach, CA 92660
(714) 546-7360

MAJ Paul C. Farmer, USMC
Aviation Trng. Prog.
U.S. Marine Corps Reserve Forces
7116 Counter Pl.
Burke, VA 22015
(703) 455-0184

D. Fiene
U.S. Navy
7220 Renda
Millington, TN 38053
(901) 872-1820

Russell B. Flanders
Executive Director
Natl. Occupational Info. Coord. Comm.
2100 M Street, NW, Suite 714
Washington, DC 20037
(202) 653-5665

LTC William C. Flinn, Jr., USAF
Interim President, Comm. Coll.
U.S. Air Force
Maxwell AFB
Montgomery, AL 36102
(205) 273-6386

LT Glenn Flood, USN
Asst. Sec. Defense, Pub. Affairs
Rm. 2E800, The Pentagon
Washington, DC 20301
(202) 695-4299

Sean Foley
Washington Legislative Asst.
Michigan Dept. of Education
1111 19th St., NW, Suite 1050
Washington, DC 20036
(202) 223-4040

MAJ Stephen P. Freiherr, USMC
Enl. Trg. Plans. Office
U.S. Marine Corps
HQMC (MPP-24)
Washington, DC 20380
(202) 694-1653

Dr. David S. Gailey
State Department of Education
250 E. Fifth So.
Salt Lake City, UT 84111
(801) 533-5371

Raymond E. Gatti
Director, Extension Education
Fayetteville Technical Institute
Fayetteville, NC 28307
(919) 497-5691

Delbert M. Gibbs
Associate Professor
Corpus Christi State Univ.
P.O. Box 175
Weglaco, TX 78596
(512) 968-3282

Dr. Wayne Giles
Chairman
Illinois SACVE
1560 E. Sycamore
Canton, IL 61520
(309) 647-4645

Dr. J. Richard Gilliland
President
Metropolitan Tech. Comm. College
Omaha, NE 68100
(402) 449-8415

Theodore C. Glenn
Supvsry. Director, T & I Programs
D.C. Public Schools, Slowe School
14th & Jackson Sts., NE
Washington, DC 20017
(202) 576-7272

W. A. Goddard
Executive Director
Nat'l asso. of Trad and Tech. Schools
2021 K St., NW
Washington, DC 20006
(202) 296-8892

William M. Goff
Employee Development Specialist
Red River Army Depot, DoD
Attn: SDSRR-AC-TD
Texarkana, TX 75507
(214) 838-3261

James R. Graves
Deputy Director, Personnel
Defense Logistics Agency
4771 Tapestry St.
Fairfax, VA 22032
(703) 323-0834

C. M. Green
Associate Commissioner
State Dept. of Education
P.O. Box 2219
Hartford, CT 06415
(203) 566-7540

Donna M. Gruntz
Legislative Associate
American Assoc. for Adult & Cont. Ed.
1201 16th St., NW, Suite 301
Washington, DC 20036
(202) 822-7866

William A. Grusy
Director, Div. of Postsec. Programs
Texas Education Agency
201 E. 11th
Austin, TX 78701
(512) 834-4233

COL Thomas M. Hamlin, USMC
Director of Testing
MEPCOM
120 MacArthur Loop
Ft. Sheridan, IL 60037
(312) 926-2366

Richard L. Haner
Supervisor of Occupational Education
New York State Education Dept.
99 Washington Ave.
Albany, NY 12065
(518) 474-4806

Edward T. Hannon
Director, Career Education
Quincy P.S.
Quincy, MA 02169
(617) 471-0100 Ext. 796

William P. Harnett
Mfg. Eng./Trng. Coordinator
Bendix Corp.
8051 Bayberry Rd.
Jacksonville, FL 32217
(904) 731-9500

MAJ JoAnn Harrington, USA
7130 Hanks Pl.
Springfield, VA 22153
(703) 695-0895

Lonnie Hart
Manager, Special Programs
Ill. State Board of Education
100 N. First
Springfield, IL 6277
(219) 782-5098

John Walker Hartigan
Director of Shipyard Training
Dept. of the Navy-Nvl. Sea Sys. Comm.
SEA 072
Washington, DC 20362
(202) 692-7516

Jean Hay-Langston
Representative
Prentice Hall Media
8805 Victory Lane
Potomac, MD 20854
(301) 299-7938

Louis Heilig
Vice Pres., Gen. Mgr.
Ford Aerospace
1 Ford Rd.
Newport Beach, CA 92663
(714) 720-4122

RADM A. J. Herberger, USN
OPNAV OP-13
U.S. Navy-OP-01
1320 Towlston Rd.
Vienna, VA 22180
(703) 796-4656

Henry Herzing, President
Nat'l Asso. of Trade and Tech. Schools
2021 K St., NW
Washington, DC 20006
(202) 296-8892

Roger Hess
Member Institution
Natl. Assoc. of Trade & Ind. Schools
2201 W. Howard
Evanston, IL 60202
(312) 238-8100 Ext. 210

CPT Robin L. Higgins, USMC
Admin. Asst., Trng. Dept., HQMC
Marine Corps
Code TAP, HQMC
Washington, DC 20380
(202) 594-2872

Nancy H. Hill
Vice-Chairperson
Nat. Adv. Council on Adult Educ.
Box 105
Lyndonville, VT 05851
(802) 626 5993

Richard A. Hines
Employee Development Specialist
Defense Depot, Memphis
5483 Finchwood Cv.
Memphis, TN 38115
(901) 365-9246

LT Roy L. Holbrook, USN
6005 S. Gulf Manor Dr.
Pensacola, FL 32506
(904) 944-5571

Walter Howard
Director, Postsec./Tech. Educ.
Ga. Dept of Education
Twin Towers East 17th Floor
Atlanta, GA 30034
(404) 656-4059

CPT Richard G. Howson, USAF
Chief, Training Policy
Directorate of Personnel Programs
Headquarters, U.S. Air Force
Washington, DC 20330
(202) 695-7321

Douglas J. Hutchins
Employment Training Coordinator
Ct. Dept of Economic Dev.
210 Washington St.
Hartford, CT 06112
(203) 566-2903

Kathy Irby
Civilian Supervisor, JOBS
Naval Tech. Trng. Ctr.-Meridian JC
Highway 19 North
Meridian, MS 39309
(602) 679-2680

Mark Johnson
Assistant Commissioner
Ct. Board of Higher Education
61 Woodland
Hartford, CT 06105
(203) 566-3912

Michael L. Johnson
Personnel Supervisor
Red River Army Depot, DoD
Texarkana, TX 75507
(214) 838-2629

MAJ Larry J. Jurica, USMC
HQMC (Code MPI-20)
Washington, DC 20380
(202) 694-4165

David R. Keltner
Education Program Administrator
Dept. of the Army
6161 Edsall Rd., #1203
Alexandria, VA 22304
(703) 370-8091

Dr. N. Kerr
Psychologist
Department of the Navy
NAS Memphis
Millington, TN 38054
(901) 872-5594

Dr. N. Kinzer
Deputy for Human Resources
Office of Asst. Secretary of the Army
2E580, The Pentagon
Arlington, VA 22201
(202) 697-2631

BG J. Kirk, USA
83-2065
Director of Training, U.S. Army
The Pentagon
Washington, DC 20310
(202) 697-3751

Hon. Lawrence J. Korb
Assistant Secretary of Defense
Manpower, Reserve Affairs, & Logistics
Department of Defense
The Pentagon, Room 3E808
Washington, DC 20310
(202) 695-5254

E. S. Kowalewski
Military Assistant
Asst. Secretary of the Army
The Pentagon
Washington, DC 20310
(202) 695-4596

Clyde Kramer
President
Northeast Iowa Technical Institute
Box 400
Calmar, IA 52132
(319) 562-3263

LTC Jeanette D. Kraska, USA
Nurse Staff Advisor
Office, Chief Army Reserve
The Pentagon
Washington, DC 20310
(202) 697-3023

CPT L. W. Kreiner, USN
Special Asst. Chief of Naval Reserve
4400 Dauphine
New Orleans, LA 70146
(504) 948-1244

COL Bruce R. LaForce, USAF
Director of Training, HQ AFRES
Air Force Reserve
Robins AFB, GA 31098
(912) 926-5058

Robert E. Laird
Chief, Instruct. Prog. Dev.
Maryland State Dept. of Educ.
200 West Baltimore St.
Baltimore, MD 21201
(301) 659-2085

E. Michael Latta
Executive Director, State
Advisory Council
530 N. Wilmington St.
Raleigh, NC 27612
(919) 783-2065

Nancy Lay
Asst. Coord. of Industrial Trng.
Miss. State Dept. of Educ.
P.O. Box 771
Jackson, MS 39205
(601) 354-6854

John P. Leahy
San Diego Community College
3375 Camino del Rio So.
San Diego, CA 92108
(714) 225-3625

David Leeb
Executive Secretary
Council of Developing Institutions
Mercer County College, 1200 Trenton Rd.
Trenton, NJ 08690
(609) 586-4800

Charles L. Lewis
Executive Vice President
APEA/NVEA
5203 Leesburg Pike
Falls Church, VA 22041
(703) 820-4200

Martin Libicki
Economist
OPNAV
WB-514, The Pentagon
Arlington, VA 20350
(202) 695-5302

W.H. Lindahl
Director Manpower Analysis
Secretary of the Navy
The Pentagon
Wasington, DC 20350
(202) 695-5302

CDR J.W. Losa, USN
Chief Naval Educ. & Trng.
8108 Li Fair Dr.
Pensacola, FL 32506
(904) 452-3591

COL William J. Lumpkins, USAR
Chief, Operation & Training Division
Office Chief of Army Reserve
The Pentagon, Room 1E537
Washington, DC 20310
(202) 697-7987

Kathy Lusk
Dean, Occupational Education
Santa Ana College
17th & Bristol
Santa Ana, CA 92667
(714) 667-3497

John M. Lyman
Manager, Technical Training
Pratt and Whitney Aircraft
400 Main Street
East Hartford, CT 06108
(203) 565-4019

John T. MacNamee
Trng. Prog. Coordinator
U.S. Marine Corps Reserve
5713 Harnich Ct. #31
Alexandria, VA 22311
(703) 671-7256

Robert M. Madson
Manager, Voc. Ed.
Minn. Dept. of Education
555 Cedar
St. Paul, MN 55110
(612) 296-3995

MAJ J. A. Marlin, USMC
HQMC (Code TAP)
Washington, DC 20830
(202) 694-1551

Santo P. Marzullo
Chairman, Tech. Teacher Trng.
Univ. of DC
4200 Connecticut Ave., NW
Washington, DC 20008
(202) 282-7505

D.B. Massengale, Jr.
Member
Miss. Board of Vo-Tech Education
1710 Bates Drive
Pascagoula, MS 39567
(601) 762-5392

William A. Matz
St. Supv. for Trade & Indust. Educ.
St. Dept. of Public Instruction
P.O. Box 1402
Dover, DE 19901
(302) 736-4681

Carol A. McAuliffe
Division Head, Bus., Ind. & Gov. Trng.
State Technical Institute
5983 Macon Cove
Memphis, TN 38134
(901) 377-4207

Dr. John F. McCarthy, Jr.
Vice Pres. & Gen Mgr.
Northrop Electromechanical Div.
500 E. Orangethorpe
Anaheim, CA 92801
(714) 871-5000

Luther B. McDaniel
Supv. Personnel Mgmt. Spec.
U.S. Air Force
1427 Plumeria
San Antonio, TX 78232
(512) 494-9898

Rod McIntyre
Apprentice Prog. Administrator
Puget Sound Naval Shipyard
Bremerton, WA 98314
(206) 476-2745

COL Medlin, USAR
OSD-Reserve Affairs
Box 20068 (628 Summit Ave.)
Greensboro, NC 27420
(919) 378-9141

George Mehallis
Exec. Director, Tech. Education
Broward Community College
225 E. Las Olas Blvd.
Ft. Lauderdale, FL 33301
(305) 761-7483

Frank Mensel
Vice President
Amer. Assoc. of Comm. & Junior Coll.
1 Dupont Circle
Washington, DC 20036
(202) 293-7050

David Meyer
Manager, Technical Training
Rockwell International 4300 E. Fifth Ave.
Columbus, OH 43216
(614) 239-2922

Anne K. Milkes
Executive Director
Hanna Harrison Career Schl. of Nursing
4470 MacArthur Blvd.
Washington, DC 20007
(202) 333-3500

Juliet Miller
President
NVEA
317 Kertess
Worthington, OH 43085
(614) 436-8004

John W. Moffitt
Dep. Chan. for Educ. Prog.
Central Texas College
Hwy. 190 W.
Kulleen, TX 76542
(817) 526-1210

Earle W. Moore
Coord. & Dev.
S.C. State Board for Tech.
111 Executive Dr.
Columbia, SC 29210
(803) 758-6968

Joe E. Moore
Employee Development Specialist
U.S. Army
The Pentagon
Washington, DC 20310
(202) 697-9661

John Moore
Area Coord. Navy Recruit. Area 4
U.S. Navy
428 Cedar River Rd.
Newark, OH 43055
(614) 366-1713

Dr. Mary Moran
Staff
Pres. Task Force on Priv. Sctr. Init.
734 Jackson Pl.
Washington, DC 20500
(202) 395-7362

MAJ Bruce W. Morrow, USAR
HQDA (DARR-OTI)
Washington, DC 20310
(202) 325-8480

David Mueller
Assoc. Dean of Instruction
Texarkana College
2500 W. Robinson Rd.
Texarkana, TX 75503
(214) 838-4541 Ext. 377

Walter E. Muller
Senior Staff Scientist
George Washington Univ.
707 22nd St., NW
Washington, DC 20037
(202) 676-7505

Jim Myers, Dean
Occupational Education
Florida Jr. College, Downtown Camp.
101 W. State St., Room A1170
Jacksonville, FL 32202
(904) 633-8284

William S. Neale
Trng. Administrator, DCS/Tech. Trng.
Air Training Command (USAF)
Randolph AFB, 422 Faircrest
San Antonio, TX 78329
(512) 652-4521

Kenneth L. Nelson
Acting Director of Training
Fort Bragg
6010 Dahlgren Ave.
Fayetteville, NC 28304
(919) 867-2154

LCDR K. M. O'Brien, USN
Program Manager
Arlington Annex
Arlington, VA 22044
(901) 694-5559

Lester G. Orech
Supervisory Educ. Prog. Administrator
HQ Dept. of Army
HQDA (DAAG-ED)
Alexandria, VA 22331
(202) 325-9800

O. E. Osborn, USN
Director, Total Force Plng./Trng.
3206 Wessynton Way
Alexandria, VA 22309
(703) 694-5217

Elwood Padham
Associate Commissioner
State of Maine
State Office Bldg., Bureau of Voc. Ed.
Augusta, ME 04333
(207) 289-2621

COL Julius D. Pantalone, USA
First Army Medical Advisor,
Ft. Meade, MD 20755
(301) 923-3024

Dolores M. Parker
Supervising. Director for Bus. Ed.
D.C. Public Schools
4400 Iowa Ave., N.W.
Washington, DC 20011
(202) 576-7481

Dale Parnell
President
Amer. Assn. of Comm. & Jr. Colleges
1 Dupont Circle, NW, #410
Washington, DC 20036
(202) 293-7050

Robert D. Parsons
Dir. of Bus. & Ind. Services
State of Tenn. Div. of Voc. Ed.
200 Cordell Hull Bldg.
Nashville, TN 37219
(615) 741-1320

James J. Pasztor
Training Division
Washington HQ Svcs., OSD
The Pentagon
Arlington, VA 20301
(703) 697-3305

Robert S. Patterson
Director, Vocational Industrial Ed.
Texas Education Agency
201 E. 11th
Austin, TX 78701
(512) 834-4256

Dr. Edward J. Philbin
Deputy Assistant Secretary of Defense
OSD-RA (Reserve Affairs)
The Pentagon
Washington, DC 20301

Mary Thornton Phillips
Asst. Commissioner
Div. of Voc. Ed., State Dept. of Ed.
550 Capitol Sq.
St. Paul, MN 5510
(612) 296-3995

Paul F. Pothin
Industrial Relations Advisor
U.S. Air Force
Rm. 4C287, The Pentagon
Washington, DC 20330
(202) 695-3779

Maurice H. Price
Director
Central Texas College, Ft. Bragg
Bigler St.
Ft. Bragg, NC 28303
(919) 436-0526

Dean Prochaska
Voc. Ed. Director
Kansas
120 E. 10th
Topeka, KS 66612
(913) 296-3951

John Provence
Director
Tinker Vo-Tech Training Center
2954 ABG/DPCT (2) Bldg. 675
Tinker AFB, OK 73145
(405) 734-7266

Lorraine G. Ratto
Asst. Dpty. Chief of Naval Material
Manpower & Personnel
U.S. Navy (MATOIM)
Washington, DC 20360
(202) 692-3230

Michael E. Reed
Head Research Branch
Navy Recruiting Command
4015 Wilson
Arlington, VA 22303
(703) 696-4896

William J. Reilly
Supervisor of Educ. Planning
Penn. Dept. of Education
333 Market St.
Harrisburg, PA 17108
(717) 787-8804

Edward R. Remiszewski
Chief, Military Education Branch
National Guard Bureau
811 Dellwood Dr.
Fallston, MD 21047
(301) 671-4789

T.C. Richards
Commander, Keesler Tech. Trng. Ctr.
U.S. Air Force Training Command
201 Arnold Cr.
Biloxi, MS 39531
(601) 377-2010

H. Dean Risinger
Vice Pres. for Adm. Services
Pikes Peak Community College
5675 S. Academy Blvd.
Colorado Springs, CO 80906
(303) 576-7711

Larry E. Ritchey
Manager Training Support
Detroit Diesel Allison Div.-GM
3318 Ashway Dr.
Indianapolis, IN 46224
(317) 242-6112

Philip M. Riusle
Director of Human & Fiscal Res. Deve.
Catonsville Community College
800 S. Rolling Rd.
Catonsville, MD 21228
(301) 455-4391

Spencer N. Roads
Chief, Training Division
Air Force Logistics Command
Wright-Patterson AFB, OH 45433
(513) 257-7483

H. Earl Robert
Director of Continuing Education
Delaware Tech. & Comm. College
1831 N. DuPont Pkwy.
Dover, DE 19901
(302) 736-5401

James A. Roberts
President
Prep International
1007 Whitehead Rd.
Trenton, NJ 08638
(609) 882-2668

L.A. Ruberton
Military Pers. Mgmt. Specialist
Headquarters Dept. of the Army
Washington, DC 20310
(202) 695-0836

Gerald Saucier
Vocational Technical Supervisor
La. State Dept. of Education
P.O. Box 44064
Baton Rouge, LA 70804
(504) 342-6909

Robert C. Schleiger
President
Chesapeake College
P.O. Box 8
Wye Mills, MD 21679
(301) 822-5400

Mark Schmutzler
Regional Coordinator
State of West Virginia
614 W. King St.
Martinsburg, WV 25401
(304) 263-8948

W.S. Sellman
Deputy Director for Accession Policy
Department of Defense
The Pentagon, Room 2B271
Washington, DC 20301
(202) 695-5525

Donald W. Seykowski
Director, Naval Ed. & Dev. (DNED)
U.S. Navy
Chief Naval Education and Training N-02
Naval Air Station Pensacola, FL 32508
(904) 452-1808

MAJ Donald C. Sheehan, USMC
Headquarters, U.S. Marine Corps
U.S. Marine Corps
2311 9th St.
Arlington, VA 22024
(703) 524-2424

Jack E. Shell
Director Davis Area Vocational Center
751 S. 650 E.
Centerville, UT 84010
(801) 295-6672

E.H. Shemwell
Deputy Chancellor, Coll. Support Prog.
Central Texas College
Hwy. 190 West
Killeen, TX 76541
(817) 526-1229

LTC. William Sheppard, USAF
Randolph AFB, TX 78150
(512) 652-6589

COL Richard J. Sims, ARNG
Chief, Plans, Operations & Trng.
Alabama Army National Guard
Rt. #2
Grady, AL 36036
(205) 584-7743

David L. Smith
Chief Executive Officer
N. Orange County Reg. Occup. Prog.
2360 W. LaPalma Ave.
Anaheim, CA 92801
(714) 776-2170

Jim Smith
Industry/Education Liaison
S.C. Dept. of Education
903 Rutledge Bldg.
Columbia, SC 29201
(803) 758-5375

Donald H. Snodgrass
Deputy Director
Division of Adult Education Services
Office of Vocational & Adult Education
U.S. Department of Education
Washington, DC 20202
(202) 245-9793

CPT Douglas H. Sommer, USN
Total Force Plng./Trng. Division
Department of the Navy
Washington, DC 20350
(202) 694-4976

Gaynor E. Sorrell
Staff & Employee Relations Spec.
Defense Logistics Agency
Cameron Station
Alexandria, VA 22041
(703) 274-6031

LTC P.B. Southmayd, USMC
Head, Tact. Motor Transp. Sec.
U.S. Marine Corps
LME-3, LME, I & L Dept., HQMC
Washington, DC 20380
(202) 695-3041

Joyce I. Sowa
Personnel Management Spec.
CNO (OP-14)
Arlington Navy Annex
Arlington, VA 20360
(703) 694-0810

Harold Starr
Sr. Research Specialist/Voc. Ed.
Natl. Ctr. for Research in Voc. Ed.
1960 Kenny Rd.
Columbus, OH 43209
(614) 486-3655

COL W.T. Stewart
Chief, Office of Training
National Guard Bureau
The Pentagon, Room 2E365
Washington, DC 20310
(202) 697-6168

Eugene Sullivan
Asst. Dir., Office of Educ. Credits &
Credentials
Ammerican Council on Education
1 Dupont Circle
Washington, DC 20036
(202) 833-4685

Kenneth Swatt
Chief, Econ. Dev. Support
Pa. Dept. of Education
Box 911, 333 Market St.
Harrisburg, PA 17108
(717) 787-5293

R. A. Sweek
Coordinator, VTE Programs
Div. of Voc. Tech. Education
P.O. Box 6640
St. Thomas, VI 00801
(809) 774-0100 Ext. 211

Buddy T. Takata
Corp. Mgr., Personnel Dev.
Hughes Aircraft Co.
P.O. Box 90515, Bldg. 100, M/S A-619
Los Angeles, CA 90250
(213) 670-1515, Ext. 6485

MG Herbert R. Temple, ARNG
Director, ARNG
National Guard Bureau
The Pentagon
Washington, DC 20310
(202) 697-5559

Douglas E. Testerman
Director, Academic Programs
U.S. Air Force
67 Creek Dr.
Montogomery, AL 36117
(205) 279-9342

Robert Thomas
State Supervisor, T & I
St. Thomas, Virgin Islands
Box 6181
St. Thomas, VI 00801
(809) 774-3046

LTC Bobby P. Tindell, USAF
Chief, Systems/Spec. Trng. Branch
Headquarters, U.S. Air Force
Washington, DC 20330
(202) 695-7321

Ronald Torp
Director, Career Trng. Center
1010 S. Gratiot
Mt. Clemens, MI 48043
(313) 468-9685

Jane Town
Director, P.N. Program
Hannah Harrison Career School
4470 MacArthur Blvd.
Washington, DC 20007
(202) 333-3500

Bill Turner
Mgr., Personnel Administration
Northrop Elector-Mechanical Div.
500 E. Orangethorpe
Anaheim, CA 92801
(714) 871-5000 Ext. 1001

Francis Tuttle
State Director, Okla.
Vocational Education
1515 W. 6th Avenue
Stillwater, OK 74074
(405) 377-2000

Jessie K. Ulin
Director of Research
Natl. Adv. Council on Contg. Educ.
425 13th St., NW, Suite 529
Washington, DC 20007

BG Wilma L. Vaught, USAF
Commanding General, HQ, MEPCOM
U.S. Air Force
Qtrs. A, USNRTC
Great Lakes, IL 60037
(312) 926-3868

Rick Ventura
Executive Director
National Advisory Council on
Adult Education
425 13th St., NW
Washington, DC 20004
(202) 376-8892

MAJ Dennis M. Verzera, USMC
XO MWSG-47
Naval Air Facility
Selfridge AFB
Detroit, Michigan 48045
(313) 949-5456

Benjamin E. Waller
Vice Commndr., AF Recruiting Serv.
U.S. Air Force
5910 Royal Ridge
San Antonio, TX 78239
(512) 652-5801

Edwin L. Ward
Dean
St. Philips College
521 Paseo Canada
San Antonio, TX 78232
(512) 531-3444

MAJ James E. Watson, USAF
AF/MPXOA
Accession/Reenlistment Policy
The Pentagon
Washington, DC 20330
(202) 695-4697

Roy Watson
Assoc. Dean, Voc. Ed.
Green River Comm. College
12401 SE 320th St.
Auburn, WA 98002
(206) 833-9111

Milton Weatherhead
AC-Delco School Instructor
AC-Delco-Gen. Motors. Corp.
10355 Lee Hwy.
Fairfax, VA 22030
(703) 273-2140

Tom Welch
State Director, Vocational Education
State of Delaware/DPI
P.O. Box 1402
Dover, DE 19201
(302) 736-4638

J. William Wenrich
President
Santa Ana College
17th & Bristol
Santa Ana, CA 92706
(714) 667-3350

Elwyn G. Wheat
State Director, Voc. Ed.
Mississippi
P.O. Box 771
Jackson, MS 39205
(601) 354-6980

COL Francis V. White, Jr., USMC
Asst. Dpty. Chief of Staff for Trng.
HQ, U. S. Marine Corps
Washington, DC 20380
(202) 694-2540

Charles O. Whitehead
President
State Tech. Inst. at Memphis
5983 Macon Cove
Memphis, TN 38134
(901) 377-4200

Alexandra K. Wigdon
Senior Research Associate
National Academy of Sciences
2101 Constitution, NW
Washington, DC 20418
(202) 334-3026

John H. Williams
Deputy Commander, Maint.
National Guard Bureau
201 Woodcrest Ave.
Absecom, NJ 08201
(609) 646-2412

CDR J.O. Williams, USN
Naval Recruiting Command
4015 Wilson
Arlington, VA 22303
(703) 696-4181

CDR Louise C. Wilmot, USN
Depty. Director, Accession Policy
Office of Asst. Sec. of Defense
The Pentagon
Washington, DC 20301
(202) 695-5525

Richard D. Wilson
Deputy Chancellor-Fort Hood Campus
Central Texas College
Hwy. 190 West
Killeen, TX 76541
(817) 526-1223

Walter L. Wimmer
Asst. State Director, Voc. Ed.
State of Vermont Dept. of Education
120 State St.
Montpelier, VT 05602
(802) 828-3101

Mary B. Wine
Director of Professional Relations
Assn. of Independent Coll. & Schools
1730 M St., NW
Washington, DC 20036
(202) 659-2460

Edwin L. Word
Director, Voc. Instruction
Georgia Dept. of Education
Twin Towers, East-17th Floor
Atlanta, GA 30334
(404) 656-2560

Hon. Robert M. Worthington
Assistant Secretary
Office of Vocational & Adult Education
U.S. Department of Education
Washington, DC 20202
(202) 245-8166

LTC Regan R. Wright, USMC
Policy Officer, Trng. Dept.
Headquarters Marine Corps
Washington, DC 20380
(202) 694-1551

John K. Wu
Deputy Assistant Secretary
Office of Vocational & Adult Education
U.S. Department of Education
Washington, DC 20202
(202) 245-2555

COL James F. Young
Commander, DCASMA Santa Ana Ca.
DCAS
34 Civic Ctr. Plaza
Santa Ana, CA 92701
(714) 836-2701

COL William Zaldo, USA
Chief, Accession Div.
U.S. Army, Dep. Chief of Staff Pers.
6034 Wakely Dr.
Fairfax, VA 22039
(703) 250-4978

PLANNING COMMITTEE

Hugh Bradley
Industrial Specialist
Dept. of Defense
5203 Leesburg Pike
Falls Church, VA 22041
(703) 756-2310

Dr. Carolyn Carroll
Research Psychologist
U.S. Army Research Institute
5001 Eisenhower Ave.
Alexandria, VA 22333
(202) 274-8694

Lot H. Cooke, Jr.
Program Analyst
Office of Vocational & Adult Ed.
7th & D Sts., Sw, ROB #3--Rm 5600
Washington, DC 20202
(202) 245-8190

Dr. Howard F. Hjelm
Director, Div. of Innovation
and Development
OVAE/Dept. of Education
ROB #3, Room 5044
Washington, DC 20202
(202) 245-2278

John P. Hudson
Manager, Conventions & Conferences
American Vocational Association
2020 N. 14th St.
Arlington, VA 22201
(703) 522-6121

COL Lloyd H. T. Johnson, USAF
OSASD (RA) Air Force
Room 3C980, The Pentagon
Washington, DC 20301
(202) 697-4334

Dr. Anita Lancaster
Program Manager
Directorate for Accession Policy
Manpower, Reserve Affairs & Logistics
Office of Asst. Secy. of Defense
Department of Defense
The Pentagon, Room 2B269
Washington, DC 20301
(202) 697-9267

Dr. Paul Manchak
Chief, Curriculm & Instruc. Br.
U.S. Dept. of Ed., OVAE
7th & D Sts., SW, Room 5034
Washington, DC 20202
(202 245-2653

George Sanders
Chief, Appalachian Regional Staff
Office of Vocational & Adult Education
U.S Department of Education
Washington, DC 20202
(202) 245-2653

Richard J. Schnurr
Senior Staff Assistant
ODASD (CPP)
Room 3D265, The Pentagon
Washington, DC 20301
(202) 695-0813

COL William A. Scott, USA
Deputy Director for Trng. & Education
Office of the Secy. of Defense
Manpower, Reserve Affairs & Logistics
Room 3B930, The Pentagon
Washington, DC 20301
(202) 695-1760

Dr. Carroll F. Towey
Senior Education Program Advisor
Office of Vocational and Adult Education
U.S. Dept. of Education
Washington, DC 20202
(202) 472-6502

Alvin Tucker
Director, Training & Education
Off. of the Sec. of Defense
Manpower, Reserve Affairs & Logistics
Room 3B930, The Pentagon
Washington, DC 20301
(202) 695-2618

Hon. Robert M. Worthington
Assistant Secretary
Office of Vocational & Adult Education
U.S. Department of Education
Washington, DC 20202
(202) 245-8166

CONTRIBUTING GROUPS

Dr. Gene Bottoms
Executive Director
American Vocational Association
2020 N. 14th St.
Arlington, VA 22201
(703) 522-6121

James Galloway
President
Natl. Assoc. of St. Directors of
  Vocational Education
c/o Dept. of Adult, Voc., & Tech. Ed.
Illinois State Board of Education
Springfield, IL 62706
(217) 782-4870

Dr. John W. Struck
Executive Director
Natl. Assoc. of State Dir. of Voc. Ed.
200 Lamp Post Lane
Camp Hill, PA 17011
(717) 763-1120

APPENDIX C

REMARKS BY THE HONORABLE FRANK C. CARLUCCI

DEPUTY SECRETARY OF DEFENSE

U.S. DEPARTMENT OF DEFENSE

29 SEPTEMBER 1982

I am delighted to have the opportunity to join you this evening to discuss the important role of vocational education in maintaining our nation's defenses. I am gratified and encouraged that representatives from government, industry, and education have all come together to examine how America can muster its tremendous human potential to meet the challenges of our modern technological world. You are addressing one of the most important and difficult problems facing our nation's security today.

Too often debates about national security revolve around strategic issues or military hardware. They miss the most important variable in the national security equation -- people. Lessons learned in the recent conflicts in the Middle East and the South Atlantic -- as well as on battlefields down through history -- all teach us that human rather than material factors provide the margin of victory.

Occasionally when a representative from the Defense Department testifies in Congress about the requirements of the Defense program, some Congressman will ask him if he would trade places with his counterpart in the Soviet Union. The answer is always no. But not because we do not envy the material resources available to our Soviet counterparts. For the Soviets have invested enormous sums to provide their military with a large force equipped with increasingly sophisticated weapons. But the Soviet Union cannot come close to matching the motivation, intelligence, and initiative of the men and women in the ranks of our Armed Forces and the dedicated civilians working for our Defense Department. Of that every American can be justly proud.

Unfortunately in the 19[illegible]'s America tended to take our manpower advantage over the Soviet Union for granted. By failing to compensate adequately our servicemen and women and to offer them the dignity and quality of life that they deserve, we allowed the foundation of the all volunteer force to crumble. We were unable to recruit sufficient numbers of top quality people; our re-enlistment rates plummeted as military personnel left the service at the end of their obligated tours. Morale in our units worldwide was at a low ebb.

As part of President Reagan's pledge to restore America's defenses, he gave first priority to correcting those deplorable personnel conditions. A large part of the increase in the Defense budget that we received last year was used to raise salaries by 14.3%, pay re-enlistment bonuses and improve the quality of life for the military.

We see clear evidence that our quick corrective measures are working. The members of the Armed Forces -- and the youth of America -- quickly recognized that dignity had been restored to military service and that we were sincere about compensating them adequately for their work and sacrifices. Then the quality and educational levels of our recruits rose, ... then our junior officers and enlisted personnel began remaining beyond their initial terms, ... then the morale, discipline, and harmony in our units and on our ships surged dramatically.

In the past nine months the Armed Services have not only recruited 103% of their objectives, but they also have been able to obtain better educated young Americans. In the last full fiscal year before President Reagan took office, only 68% of our recruits had high school diplomas; now 82% are graduates. That additional 14% provides the essential margin of vitally needed skilled manpower to operate and maintain our modern equipment. That means our military gear will work better and break down less frequently.

Pay increases, re-enlistment bonuses, and other benefits have also helped us to retain the services of our experienced personnel after their terms of service expire. Two years ago the re-enlistment rate was 55%; for the past nine months it has been 72%. That means that we save on training time and costs for replacements. Higher retention rates also mean that we have more experienced and mature leaders to guide our young recruits. That should be particularly heartening to all Americans with sons and daughters in the military today.

The Soviet Union is far less concerned about recruiting, pay and quality of life, or retention. While we spend 51% of our Defense budget for personnel, only about 15% of the Soviet defense budget is allocated for personnel costs. About 75% of the Soviet Armed Forces are conscripts, pay is extremely low and living conditions are abysmal. It is no surprise that the re-enlistment rate of the conscripts is less than 2% and the Soviets have only a 25% career force of mostly officers.

On the other hand, the Soviet Armed Forces outnumber us by a ratio of 2 to 1. We have tried to counterbalance that by providing our Armed Forces with more advanced equipment. Technology can be a great force multiplier.

For example, today there are fewer soldiers in the Army for each combat division than at any time since before World War II; but today's division has ten times the firepower of a World War II division. Our Navy is building ships which are not only more powerful than their predecessors, but far more efficient. New anti-missile cruisers have highly sophisticated weapons of far greater range and much improved reliability; and they are manned by a crew of 319 while the cruisers they replace had crews of 1600.

For the Air Force, the leverage on manpower efficiency provided by its modern aircraft and ordnance is equally impressive. During August 1944, as allied forces broke out of Normandy, 3000 heavy bombers of the 8th Air Force flew more than 18,000 sorties. Something like 30,000 aircrew members were required for this effort. Today, 800 F-16 fighters, manned by just 800 pilots, could deliver the same tonnage of bombs over comparable distances, but much more accurately.

The Soviets also recognize the tremendous military advantages of modern technology and have embarked on a vigorous modernization effort. In some cases they have already begun to supplement their quantitative superiority over us with a qualitative edge. Our great concern is that the United States must be able to maintain its technological lead -- and that is a problem that we in the Defense Department cannot solve alone.

We need the help of the education community and industry to correct the nationwide technical illiteracy that is weakening our defenses. Even the most well designed and cost effective weapons system program is useless without skilled craftsmen building sophisticated military equipment in our factories, ... without a military trained to operate complex modern gear,.... and without technically qualified personnel to keep our equipment in good repair. Meeting those needs will not be easy. Therein lies the challenge for this seminar.

For years our lead in technology and productivity was unchallenged. That is no longer the case. While other nations embarked on crash programs to harvest the fruits of modern technology, the priorities of American society shifted elsewhere. A recent statement by a Japanese economist illustrates my point:

> "You in the United States have in the last ten years doubled the number of people in law schools, while you barely even maintained the number of people in engineering schools. We in Japan have not increased the number of lawers, but have doubled the number of engineering students. Lawyers are concerned with dividing the pie, engineers with making it larger."

He is right. U.S. patents issued to foreign nationals grew from 17% of the total U.S. patents issued in 1960 to 38% in 1979. In the same 20 year period, the foreign controlled portion of the U.S. consumer electronics market increased from 5.6% to 50.6% and the foreign market position for metal working machine tools grew from 3.2% to 28%.

I need not tell this audience of the severe shortages of manpower in many technical occupational fields caused by the shift in national priorities.

We have compiled a list of 15 skill fields -- from riveters to electrical engineers -- that must have an annual growth rate of over 3.8% if we are to meet our peacetime defense needs between now and 1989. One field, shipfitters, must grow 16.4% annually. My hope is that industry and the vocational education community will join with us developing creative approaches for training workers to correct those critical shortages.

The Soviet Union has a strong headstart. While only 50% of American students study any science or mathematics beyond the 10th grade, all Soviet high school graduates have had two years of algebra and geometry in elementary school and fours years of algebra and calculus in high school. Not surprisingly, the Soviet Union graduates from college almost five times more specialists in engineering fields than the United States. And the Soviet military has unlimited access to the best of those graduates.

In the United States, with a dwindling pool of engineers and technical specialists, the situation is reversed. The military must compete with industry for skilled workers; defense industries must compete with industries serving lucrative civilian markets. Because the military usually cannot match civilian salaries in scarce skills, and because Defense business is often less attractive than commercial business, Defense is usually the loser in any competition for skilled manpower with the civilian sector in the United States.

What we need to do is not halt that competition by giving all priority to the Defense sector as the Soviets have done. We need to make the pool of technically skilled manpower available to Defense and industry bigger. That we can do best through education. We already have a vocational education system -- Federal, state, and local -- in place. In the next two days you will hear how Defense is using that vocational educational system to train contractor personnel, active duty military, reserves and national guard, and DoD's own civilian work force. Our challenge is to find creative ways to expand this cooperation to meet our nation's critical needs.

Before I conclude, I would like to highlight some of the more promising efforts underway within the Defense Department. We have had great success with the "Tools for Schools" program that loans plant equipment to vocational programs. Since 1974, almost 300,000 students have graduated from programs we have supported. We now have $52 million of equipment being used by 83,000 students. At the U.S. Skill Olympics held in Atlanta this past summer, four of the six winners in the metal working competition were from programs having loans with the Defense Department. We are proud of our graduates and of our program.

We also have numerous cooperative ventures between military installations and state and industrial vocational organizations. In a typical case, Tinker Air Force Base and the Oklahoma Department of Vocational Technical Education have had great success with training workers on-base in seven different skills. Similar classroom and on-the-job training programs take place daily at bases around the country.

We have also sought ways to make technology work for us to lessen the training burdens on our armed forces. We are building sophisticated equipment that is easier to operate and maintain. Most tankers praise the new M-1 Abrams tank -- the world's most advanced tank -- as the easiest to drive and fire. To make our equipment simpler to repair, we have designed it with built in test equipment and easily-replaced modules. And we have built sophisticated simulators to train our pilots, crewmen, and generals.

Finally, we have taken other initiatives that, because they will improve stability of our Defense industries, will enable industry to plan and participate more fully in the revitalization of our nation's technical manpower base. We have, for example, obtained permission from Congress for multi-year procurement of certain weapons. That means that now we can make firm commitments for several years of purchases and provide defense contractors with up-front funds to make capital investments. Our hope is that some of those investments will be for vocational training programs in skills needed by those industries.

That is now we will succeed, then. American industry, our vocational education institutions, and government agencies all working together. It is a worthwhile endeavor,.... an essential effort. For it will guarantee America's future, it will assure us of the strength that we require to preserve peace with freedom.

Thank you.

APPENDIX D

REMARKS BY THE HONORABLE T. H. BELL

SECRETARY OF EDUCATION

U.S. DEPARTMENT OF EDUCATION

Thank you for that kind introduction. I'm pleased to have been asked to welcome you to the Nation's Capital and to this seminar on a topic so vital to the future of our nation.

This gathering is the direct outgrowth of an exchange of letters between "CAP" and me as we work together to implement President Reagan's Defense Preparedness Program.

The Departments of Education and Defense have worked successfully together before. Their cooperation extends back to World War II, the great depression in which the Civilian Conservation Corps (CCC) camps were run by the Army with teachers recruited by the Office of Education, World War II, and the Post War era. Since the launching of the Sputnik Space Satelite, this nation has been made keenly aware of the need for further scientific and technological advances in both the civilian and military aspects of our society. Education can contribute more in the future to improve the education skills needed for this defense technology and that is one of the reasons we are here today.

I'd like to leave the specifics of this seminar to the vocational education experts - home grown and out of towners - and discuss the larger implications of this very important seminar.

The key Reagan Administration policies that directly affect both Defense and Education Departments are:

1. Support for a stronger and more modern defense capability ($1 trillion plus build-up).

2. Reduction of burden imposed by Federal regulatory programs.

3. Less involvement in matters more appropriately handled by state and local governments.

4. Efficient management of federal grants.

We all know that a special benefit of military service is a fantastic array of educational opportunities that can't be beat. I especially remember the superb training which I received and participated in during World War II thanks to the U.S. Marine Corps. Consider what the Army alone awarded in 1981; 13,000 High School Equivalency certificates, 3,800 High School Diplomas, 11,000 Vocational certificates, 2,000 Associate Degrees, 1,100 Bachelor Degrees, 1,800 Master's Degrees, and 14 Ph.Ds.

In addition to the civilian education programs there were basic and advanced military training for each career field: foreign language training, counseling and testing, and service related correspondence courses.

As I look back and reflect on the training activities that we in the Marine Corps engaged in 40 years ago and recall the excellent training manuals, training aids, and training techniques, I often wonder what closer cooperation with defense might have meant to the vocational technical schools of America.

Indeed, now more than ever it seems to me that the Defense and Education Departments should cooperate through the "honest broker and facilitor roles" to meet the challenges of high technology, the second industrial revolution, and "the comming boom".

There is the economic challenge of Japan and the so-called East Asia Edge to be considered, as well as the military challenge of the USSR and the training demands of sophisticated weapons systems. There are the demographic challenges of information/electronics and robotics to different regions (Frost-Belt vs. Sun-Belt) and the old and new manufacturing areas. There are educational challenges which face us in such areas as basic skills, enhanced excellence, high standards, new skills (math/science/computers) languages (English and foreign).

A recent report, "Information Technology and Its Impact on American Education", by the Congress's Office of Technology Assessment states in no uncertain terms that the informatijon revolution (computers and electronics) is going to have a profound effect on American education and training. By implication the Defense Department will be affected since, after all, it deals primarily in the training and development of the "Human Capital" which our diverse educational establishment graduates each year.

If the report is correct and I feel it is, then the "severe training problems" predicted for our country in the next decade will inevitably include both our Departments for the defense and education needs of our people and nation are inextricably intertwined.

Specifically, the Office of Technology Assessment report predicts the following. There will be a persistent shortage of highly trained computer scientists, engineers and other specialists. There will be a need for retraining workers displaced by factory and office automation. There is a need for a more technologically literate work force, including of course the military.

The many challenges facing our society have at their root the need to encourage all sectors of our diverse education system to stress excellence and high standards in general and in particular to emphasize a greater and greater commitment to:

- Mastering math and science to the best of individual ability

- Emphasizing the basic skills including the speaking, reading, and writing of the English language for that mastery is the overlooked golden key to success in this terribly competitive society of ours.

I am looking forward to the report of your deliberations and hope this gathering is just the beginning of a fruitful collaboration of our two departments. The American people expect a closer cooperation, communication, and collaboration among educators, the military, and private industry. And they will get it if "CAP" and I have anything to say about it.

Before I leave I'd like to exercise one of the privileges of rank and make a tentative suggestion that really comes out of the good work that you have already done. Here are some recommendations that I hope you might consider:

- That a permanent task force be established to consider ways that the Education Department can contribute to furthering missions of the Defense Department in the area of general basic education and to help the Education Department highlight more effective training and education practices and programs that can be made available to regional, state and LEA's especially in the area of vocational-technical training.

- Another function of this task force would be to draft an interagency agreement between the Department of Education and the Department of Defense whereby further activities, programs and projects could be encouraged on a regularized basis to benefit both the education and defense of our nation.

I wish you every success in this important undertaking.

APPENDIX E

REMARKS BY DR. GENE BOTTOMS

EXECUTIVE DIRECTOR

AMERICAN VOCATIONAL ASSOCIATION

30 SEPTEMBER 1982

CAPABILITIES OF A VOCATIONAL AND TECHNICAL EDUCATIONAL COMMUNITY

The American Vocational Association is very pleased to work with the Department of Education and the Defense Department in sponsoring this seminar in defense preparedness. My objective this morning is to assist in promoting understanding in reference to the capabilities of vocational and technical education.

This is not an easy task, for public and private vocational education in America contain an extremely diverse set of programs. However, I will seek to do this by looking at the institutions that deliver vocational and technical education in America, by examining the nature of vocational education programs, the enrollment pattern, the organization, the use of the community as part of the vocational education structural effort, and the support capacity that has been developed to enhance quality vocational education programs. I will conclude with possible cooperative arrangements in vocational education and defense preparedness.

The potential of vocational education to impact the human development requirements for national defense can be seen in numerous institutions that deliver it. There are approximately 26,000 plus institutions involved in delivering vocational education in America.

Today there exist over 10,000 general high schools in America that usually offer 1, 2, 3, and, at times, as many as 4 vocational courses. There has been a vast growth in the comprehensive high schools in the last few years, and presently there are approximately 5,000 of these institutions that provide, at least, 6 vocational offerings with 4 being of the laboratory type. In this nation we still have approximately 225 specialized vocational high schools, most of which are located in the larger cities. For the most part these are outstanding institutions with long waiting lists for individuals seeking to enroll. Many of these are magnet centers, and they tend to be specialized in a given occupational area such as aviation, health, etc.

The newest insitution on the American landscape is the area vocational technical center. There now exist 1400 of these centers at the secondary level. These centers have been developed to serve a number of school districts and usually offer 10 or more programs in vocational areas. Not only are secondary youths served during the day, but many adults are also accommodated in the afternoons and evenings.

There exist over 700 community colleges in America that have comprehensive educational offerings and have been classified with the state Board of Vocational Education as area vocational technical centers. These centers have excellent contact with the employment community and are viewed as a major part of a postsecondary delivery system to vocational technical education in this nation. In addition to community colleges there are 162 technical institutes in this nation. Most of them grew due to an emphasis on engineering technology; however they have expanded across several occupational areas. These are outstanding institutions, and many corporations recruit students from these nationwide.

Several states have elected to use the postsecondary area vocational technical schools as their primary delivery system for vocational education at the postsecondary level. These institutions are comprehensive in that they offer a comprehensive range of vocational programs. There are now over 500 institutions of this kind in America.

There are approximately 308 specialized postsecondary vocational schools in America that tend to offer a vocational program in a specialized occupational area. In addition, there are 586 private secondary schools that offer vocational education, and over 6,800 private and postsecondary institutions delivering vocational education training services in the nation. Many of these institutions delivering vocational education operate on a 16 hour day, this is particularly true among the community colleges. Area vocational technical schools and technical institutes are considered to have programs that have close ties with the employment community and have an outstanding placement record for their graduates. Institutions delivering vocational education to America represent several billion dollars of investment in labs, curriculum and staff, and much of this has been developed over the last 20 years.

One way to describe vocational education programs is to look at the nature of the programs offered throughout the country. It is possible to divide vocational programs into two types - those that provide preparation in non-occupational specific areas, that is the program is designed to provide people with useful skills in the workplace, and those programs that are occupational specific designed to prepare individuals for employment in a given occupational area or job.

From chart 1 you can see that there are basically 4 categories of non-occupational specific areas. One can be labeled the pre-vocational guidance program designed to assist individuals to become aware of opportunities available and to make educational and career decisions. The second type is pre-vocational which includes types of basic skills often provided to special population youth who need to upgrade these skills before pursuing an occupational specific program. In addition to pre-vocational programs, there are opportunities to participate in pre-vocational agriculture, industrial arts, business and office, and other vocational areas. Related instruction is a growing part of vocational education, and is increasing in the institutions that deliver vocational education. They provide special related instruction in academic courses which are crucial to the occupational objective. The fourth type is called employability preparation. These consumer and homemaking programs that prepare youth and adults for the occupation of homemaking are considered to be non-occupational specific.

The occupational programs can easily be divided into 4 types. Many states have organized their secondary programs on an occupational cluster basis. They prepare youth for employment in such fields as construction, metal trades, and graphic arts, whereas the secondary and postsecondary programs in other states tend to prepare people in occupational areas which are somewhat narrower in focus than the occupational cluster approach which allows for greater intensity of effort. The typical programs include machine shop, automotive, tool and dye maker, electronics, etc. By far the largest enrollment is in occupational specific area programs. However, it is not unusual for some adults and youth to want preparation only in a job specific program such as how to be a key puncher, a front end aligner or lathe operator. In such cases individuals know that the occupational specific area will already lead to a job, or they are already employed, and this will help them obtain a better job.

The final type, and the one that currently has the most growth, is employer specific programs where community colleges and vocational technical schools deliver preparation programs for employees of a particular firm(s) customized to their unique needs and objectives. This includes new and expanding industry and industry undergoing major technological changes.

Non-specific occupational enrollment exceeds 10 million individuals, while occupational specific enrollment exceeds 6 million. Approximately 3 million of the occupational specific enrollment is in the secondary level, and another 3 million is in the postsecondary level. These figures do not include the enrollment in private and vocational schools. As you can see from chart 2, the breakdown is presented in the occupational specific enrollment by major program areas of secondary and postsecondary vocational and technical programs.

Vocational education offers occupational specific preparation in over 400 different areas. The potential of vocational education and national defense preparedness is seen in a number of persons enrolled in occupational specific programs critical to national defense. For example, during 1982, as chart 3 shows, there have been a number of occupational specific areas identified. In reference to the number of persons who reported on their employment status several months after completing the program and the actual number of persons entering the military service, the small number of vocational completers who are, in fact, entering the military should be noted.

In fact, of those 1,600,000 vocational education completers in 1980 who reported on their employment status several months after graduation, 16,200 reported entering the military and over 1,500 of these were secondary vocational education graduates. It seems reasonable to assume that students completing secondary and postsecondary education could save defense training cost and provide the military with technically literate recruits. However, I was shocked that the number going into the service was no more than 1%.

Many of the vocational technical programs throughout the country are in the process of updating their programs. This includes both secondary and postsecondary. With the advent of advanced technology, this involves more intensive preparation efforts, and the strengthing of math and science that cuts across major occupational discipline areas.

For those of you from the defense preparedness establishment, you may ask the question: How does one make contact with vocational education in America? Usually contact is made at the local level by contacting the administrator responsible for the programs. For programs offered in community colleges, vocational technical schools, technical institutes, this is usually the occupational dean, the area school director or the president of the institution. In regard to programs which operate under the local board of education, it is often the local director of vocational education, the building administrator or the systems superintendent.

At the state level, every state in the nation has a state board for vocational education. That board has employed a state director of vocational education with a state staff. That would be your contact point.

Chart 4 - Vocational education is organized into 5 different structures at the State agency level. You will note that in at least 6 states, the state board of education is the same administrator for all education. In 31 states, the state board of vocational education is the same as the state board that handles elementary and secondary education. However, in 8 states there is a separate state board for vocational and technical education. The other states have a variety of arrangements.

Based on technical programs, vocational technical education programs utilize the communities in the delivery of vocational education instruction. The most popular means to use the community for the delivery of vocational education instruction is a cooperative vocational education model in which students spend a portion of their time on the job. These two learning experiences are in fact linked together. Chart 5 provides you with a breakout of a variety of approaches used to involve the comunity both in the establishment of vocational programs and the delivery of vocational education instruction. Public vocational education provides about 80% of the related instruction for the apprenticeship programs in this nation. Extensive use is made particularly in the health occupation field to provide the clinical experience in the work setting. It's estimated that over 1/2 million people preparing themselves in health occupations field spend 30-50% of their time in a health facility as part of their instructional program. In some communities, institutions are using local plant facilities and equipment after work hours for training purposes.

Many vocational technical programs now provide to employers, industry training services. That is, they will work with employers in a collaborative effort to deliver employer specific training services. Further, there is a considerable amount of staff exchange between vocational technical education and the private sector.

The National Advisory Council for Vocational Education estimates that there are over 300,000 employers, workers and labor leaders serving on general and craft advisory committees across America. For the past 20 years a considerable support capacity has developed in this nation to assist in the delivery of quality vocational and technical programs. A major national capacity is the National Center for Vocational and Technical Education at Ohio State University. This center is for research, technical assistance, leadership seminars and gives much impetus to the improvement of vocational education throughout our nation. There exist 6 regional curricula centers in which states share their efforts in curriculum development efforts.

Staff development is a major focus in all states. Vocational teachers come directly from industry and it is essential that there be a staff development system to help them acquire teaching methods and techniques.

It seems to me that there is potential for cooperative arrangements between vocational education and several elements of defense preparedness.

Through this conference, a number of exemplary examples for public and private vocational education and the military are already working together. Training workers for defense industries whether it be for a single industry or a group of industries is a potential area for collaborative efforts between vocational education and these employers. The opportunities are unlimited for collaborative efforts between institutions delivering vocational education and defense industries needing skilled workers in order to meet their contract requirements.

There is no reason why the vocational technical capacity of this nation cannot be utilized in certain specialized training for existing military personnel.

It's only logical that the vocational education graduates of the secondary and postsecondary programs would be considered potential recruits for the Armed Services. I'm surprised that the number is only approximately 1%. It may well be that this is an area needing to be explored further and examined in regard to what might be done to increase the number of vocational graduates going into the active military service.

It seems to me that there's considerable potential in the use of public and technical programs to help strengthen the nation's reserve forces. Often the vocational technical laboratories of this nation are idle on the weekends and that's often the time the reserve forces become active. Both could strengthen each other.

The military has a number of civilian employees. There's no reason why vocational technical education throughout the country cannot do for civilian employees that work for the military the same kind of services they provide to private sector employees. Several examples will be presented as part of the conference.

In summary, we can say the following about the capabilities of the vocational technical programs in America. It is an "inplace" system and it is ongoing. It has over 300,000 professional vocational educators or 26,000 institutions. It has the support capacity for curriculum development, staff development and for sharing information. Strong connections already exist between those programs and employers. Approximately 6 million youth and adults are enrolled in occupationally specific programs. Billions of dollars have been invested in buildings and equipment and extensive use is made of the community for learning purposes. Preparation is offered in over 400 different occupational areas.

Vocational and technical education represents an inplace capacity that is responsive already to the high amount of employer specific training being done. Many collaborative efforts already exist between public institutions delivering vocational education and private sector employers. Vocational education, be it public or private, in connection with defense preparedness must be expanded if appropriate capacities are to be developed to meet the nation's work force requirements. It is my sense that employers and public vocational education are in the midst of reexamining the breadth of vocational education needed to meet the nations need for a qualified workforce. This conference should allow us to learn how to better communicate with each other which is an essential first step to improve cooperative efforts.

Chart 1

WHAT IS VOCATIONAL EDUCATION ?

Pre-Vocational/Guidance

Pre-Vocational Basic Skills

Related Instruction

Employability Preparation

Occupational Group Preparation

Occupational Area Preparation

Job Specific Programs

Customized Job Specific Programs

Source: The Vocational Education Enterprise
Published by the American Vocational Association
1980

Chart 2

WHO IS ENROLLED ?

Occupational Specific

Occupational Area	Secondary	Postsecondary
Agriculture	308,336	76,604
Marketing and Distribution	289,140	312,135
Health	89,134	365,995
Home Economics	147,117	94,970
Business	1,042,897	927,621
Technical	19,754	367,363
Trade & Industrial	916,602	875,450
Other	99,544	46,836
TOTALS	2,912,534	3,066,974

Source: Vocational Education Data Survey
1979-80 (Tables 1202 and 1302)

Chart 3

RANGE OF VOCATIONAL OFFERINGS RELATED TO WORKFORCE NEEDS

	Current Voc Ed Total U.S.	Defense Needs	Enrollments
Construction Crafts Workers	4,384,190	151,450	240,523
Solderers, Welders & Cutters	889,480	81,900	224,791
Other Engineering Technicians	784,930	93,820	*
Computer Specialists	547,040	71,290	212,852
Machinists & Apprentices	572,590	75,410	123,863
Electrical & Electronic Technicians	241,190	60,710	215,331
Aircraft Mechanics	159,790	60,810	42,033
Aeronautical Technicians	116,560	4,970	*
Industrial Engineering Technicians	34,160	6,150	*
Health Technicians	561,310	5,950	*
Machinery & Equipment Mechanics	1,152,490	78,360	*
Tool & Die Makers & Apprentices	223,150	28,160	7,843
Stenographers, Typists & Secretaries	6,043,730	281,390	872,209
Other Precision Machine Operators	88,110	10,770	*

* Enrollment figures not available

Source: 1) Defense Economic Impact Modeling System
Office of Secretary of Defense
2) Vocational Education Data Survey
1979-80 (Table 1203)

Chart 4

STATE GOVERNANCE STRUCTURES

Type A
One agency for all education
6 states

Type B
Agency for elementary, secondary and vocational education and agency for higher education
31 states

Type C
Agency for elementary and secondary education, agency for vocational education and agency for higher education
8 states

Type D
Agency for elementary, secondary and vocational education and governing boards for individual higher education institutions
3 states

Type E
Other structures
2 states

Chart 5

TYPES OF COOPERATIVE ARRANGEMENTS POSSIBLE BETWEEN VOCATIONAL EDUCATION AND THE MILITARY

- Training workers for defense industries
- Upgrading training for active personnel
- Preparatory training for future recruits
- Related instruction for students participating in the Army Reserve or National Guard
- Training for civilian employees

APPENDIX F

REMARKS BY THE HONORABLE ROBERT M. WORTHINGTON

ASSISTANT SECRETARY FOR

VOCATIONAL AND ADULT EDUCATION

U.S. DEPARTMENT OF EDUCATION

President Reagan has recognized the nature of worldwide threats to our national security. Accordingly this Administration has taken action to strengthen our national defense preparedness. Some of the direct results of these policy changes that could involve vocational education include the expanded technological training of military personnel and civilians, as well as the additional training requirements of the industrial sector created by the demand to produce more technological and advanced weapon systems. Essentially this new thrust will create new opportunities for vocational education as defense related training becomes increasingly important to our nation.

Why should we be concerned during this particular time? A number of studies including one Congressional Report entitled "The Ailing Defense Industrial Base: Unready for Crisis," prepared by the House Committee on the Armed Services, identified broad problems demanding national attention and tenable solutions. Other studies have identified skilled worker shortages in such areas as:

o all categories of engineers,
o medium and high level electronic technicians,
o precision machinists,
o skilled assemblers,
o tool and die makers,
o trained assemblers, and
o shipfitters

The impact of this problem is such that it could seriously impair our defense preparedness expansion.

As the demand for high technology products and military hardware and equipment increases, a proportional demand for skilled technicians is generated. During prior periods of defense expansion, especially during World War II, vocational educators responded magnificently to this challange. I am fully confident that we can similarly respond to these new demands.

Our Department has been highly responsive in supporting the policies of the Administration relating to defense preparedness. The initial step taken toward collaboration between the Department of Education and Department of Defense was a letter sent on August 21, 1981 from Education Secretary T.H. Bell to Defense Secretary Caspar W. Weinberger. As a result of this letter, the Office of Vocational and Adult Education (OVAE) within our Department and The Office of Lawrence Korb, Assistant Secretary of Defense for Manpower, Reserve Affairs, and Logistics, were designated leadership roles to explore the possibilities for collaborative efforts between the two Departments.

I am going to briefly describe some of our exciting accomplishments. A major continuing activity was the formation and operation of the Defense Preparedness Task Force on October 1, 1981. Highlights of their accomplishments include:

o Conducting 7 monthly seminars on topics such as Defense Economic Impact Modeling System, Employment Opportunities in a Period of Rising Defense Budgets, Metropolitan Areas Most Affected by Defense Spending, and the Relationship of the new Job Training Partnership Act to Defense Preparedness;

69-70

- Establishing a repository of materials relating to defense preparedness and skilled worker shortages;
- Establishing a collaborative network on defense preparedness; and
- Providing technical assistance on defense related issues.

A second accomplishment was the convening of a Defense Preparedness Review Group representing industry, public and proprietary postsecondary institutions, State educational agencies, trade associations, and training specialists from the private sector on September 20, 1982.

Outcomes of that session featured:

- Identification of critical incidents needed for bringing about exemplary vocational, industrial, and military collaboration,
- Identification of technical assistance needed from OVAE to replicate model programs; and
- Identification of suggestions for alleviating the skilled worker shortage.

A number of these recommendations have already been acted upon, while others have been incorporated into our 1983 OVAE Management Plan. Copies of the proceedings from the Defense Preparedness Review Group session will be available after the February 1983 scheduled publication date.

The third major accomplishment was the conduct of a Vocational Education and Defense Preparedness Seminar, jointly sponsored by the Department of Education and the Department of Defense, with the support of the American Vocational Association. Featured in that seminar were 19 presentations of exemplary projects focusing upon personnel from the defense industrial base, active military, reserve military, civilians employed by Department of Defense, and those entering the military.

What can we do to continue this momentum? In all candor we should not anticipate new money or legislation from the Federal government due to severe budgetary constraints. There are, however, a number of specific items that can be accomplished using existing resources and facilities. By our working collaboratively in this endeavor, many of the perceived obstacles can rapidly dissipate. I have identified action items for Federal, State, and local attention during this forthcoming year. To achieve these with existing resources will be a challenge for all of us.

Federal initiatives for action include:

- Identify the need for defense related training for occupations requiring training of one year or longer in duration;
- Foster training performance that yields increased productivity;
- Disseminate the best products of research and demonstration relating to defense preparedness;

- Improve data management to keep personnel informed of needs, trends, and developments in skilled shortage areas;
- Encourage greater use and sharing of information with school personnel relating to skilled trade shortages to increase student recruitment in those areas;
- Complete national assessment of this comprehensive issue; and
- Encourage the replication of more of these defense related seminars.

State and local leaders have a need to know what is occurring in defense preparedness to best utilize resources to meet future labor requirements. Action steps to be taken by State and local agencies could include the following:

- Work with key public and private officials to foster development of industrial potential and technology;
- Meet with State economic development agencies to ensure they are updated on vocational achievements and capabilities;
- Conduct mini-defense preparedness seminars similar to the national model;
- Consult with industry and military installation representatives in designing new training programs for emerging needs;
- Distribute information to industry concerning capabilities for training;
- Ascertain whether or not existing job vacancies in defense industries could be addressed in new training programs;
- Create information networks for practitioners on defense preparedness topics utilizing bulletins or newsletters; and
- Increase utilization of defense contractor and military personnel as a means for improving instructional programs.

Coping with skill shortages is important to the military services and to the defense industries; and this can become an exiciting challenge for many of you in the next few years. We have identified a number of steps, which if followed, could make our task easier and more productive. I want to express my appreciation to all of you for the fine projects already underway relating to this national priority, and I have high hopes that you will continue to do our part in strengthening America's defense capabilities.

Senator **Trible**. Tell us about the proposed Vocational and Adult Education Consolidation Act of 1983. What will that provide and accomplish?

Dr. **Worthington**. That will provide the States much more flexibility to give the kind of technical training needed in the defense industrial base.

It will have three major purposes. It will consolidate vocational and adult education into one manageable piece of legislation. It will eliminate an awful lot of what some of our colleagues at the State level call nitpicking regulations and many requirements that are laid on the States that are really unnecessary.

It will have three major goals: One will be economic development through vocational education; the other will be systemwide improvement; and the third will be adult basic education.

Recognizing that this act will provide adult basic education, it, hopefully, will work toward the elimination of illiteracy in this country, which we estimate affects some 23 million Americans.

Our legislation basically simplifies the State and Federal relationship and turns back to the States a major share of the decisionmaking, while at the same time providing the Secretary with discretionary funds to target in on areas where there may still be work force shortages such as those related to the defense industries.

With the discretionary funds under that bill, the Secretary would be able to generate many activities that we cannot undertake under the present legislation.

Senator **Trible**. Will the proposed legislation bring to bear additional funding from the Federal Government?

Dr. **Worthington**. The Federal Government has, for vocational and adult education appropriated in the area of $816 million in fiscal year 1983.

We originally had an authorization ceiling on our first version of the proposal which was introduced last year. This year the bill was introduced with no authorization cap and states such sums as may be necessary to perform the activities described in the bill.

We aren't sure what Congress will feel is necessary as an appropriation, and we leave that to them.

Senator **Trible**. All right. Let me ask you an additional question. Has your department conducted any kind of study on the existence of shortages of skilled manpower in defense-related activities?

SKILLED WORK FORCE SHORTAGES IDENTIFIED

Dr. **Worthington**. Yes. Our task force is working very closely with the Department of Defense and the Department of Labor and has identified—with the assistance of the National Occupational Information Coordinating Committee, which is jointly funded between our office and the Department of Labor, and also the State occupational information coordinators, skilled work force shortages that exist.

We have also worked with the National Task Force on Skilled Work Force Shortages, a private sector group that is involved mostly in the skilled metalworking industry, and they have identified through a national pool the skill shortages in that field. We have established a national project with them, through our national center for research in vocational education, which we hope will help to recruit young people into the skilled metalworking industry.

So we have made a major effort to identify those skills which are needed and have made a major effort to encourage our State and local delivery systems to provide the skills which are needed.

Senator Trible. So the response, then, is that shortages have been identified, that information then is shared with the other partners in the vocational education process.

And what kind of incentives, then, are there in the system to insure that there will be some kind of adequate response to that national requirement?

Dr. Worthington. Under the present act the States receive program improvement grants, which can be used as the State sees fit. The State identifies in the annual State plan the occupations which are in short supply in their State and the occupations for which they propose to train the personnel during a given year.

That State plan comes into our office and is reviewed against a set of 45 criteria which are established by law.

The States are making a significant effort, we believe, to meet defense-related shortages, and we hope with our proposed legislation, the Vocational Adult Education Consolidation Act, there will be even more active participation in these training efforts.

Senator Trible. You anticipate, then, that the Vocational Adult Education Consolidation Act will supplement the funding that now exists for vocational education?

Dr. Worthington. Yes, we do. We feel not only will it provide the necessary funding from the Federal level, which as I said provides a catalyst of only 1 of $10, but will give the States much more flexibility to meet critical skill shortages that they now have.

If our bill becomes reality, it will not have all the various set-asides which, to a great degree, limit the States' flexibility. We would like to see many at the present expenditure restrictions removed so the States can do the kind of training they feel is necessary.

Senator Trible. Senator Hecht, do you have any questions to ask?

Senator Hecht. No, thank you.

Senator Trible. Let's just talk about one specific example.

A number of reports indicate there is a shortage of skilled machine tool workers. One suggested that there was a shortage of 60,000 journeyman machinists today and that that will increase to a quarter of a million by 1985.

Does the system as it now exists enable us to respond effectively? Will the natural forces of the marketplace and the programs now in existence permit us to meet that national requirement?

Dr. Worthington. Well, the system that can deliver the training is out there. The question at the State and local levels is one of identifying the resources and working closely with the private sector.

We believe that our work with the national skilled work force shortage task force for the metals industry will help solve the problem.

One of the problems we have in the skilled metal working field is that it takes a long time to develop marketable skills as a tool and diemaker or a skilled machinist, and we collaborated in this program with industry to develop more effective ways of acquainting people with opportunities in that field and helping them to understand that if they devote 4 to 5 years in training they can emerge as a skilled worker and have a lifelong career in skilled metal work.

And, with the help of industry we think we will be able to accomplish that over the next 2 or 3 years. If our consolidation bill goes through, it will give us much more flexibility, and we will be able to serve as a catalytic force to get these things in action.

Senator **TRIBLE**. All right, Mr. Secretary. We thank you for being here today.

Dr. **WORTHINGTON**. Thank you very much, Mr. Chairman.

Senator **TRIBLE**. Our next witness, Bernard Maguire, associate director of national preparedness programs, the Federal Emergency Management Agency.

I understand Mr. Maguire has not yet arrived, so we will move next to Dr. Wade. Dr. James P. Wade, Jr., Principal Deputy, Under Secretary of Defense for Research and Engineering, Department of Defense.

STATEMENT OF JAMES P. WADE, JR., PRINCIPAL DEPUTY, UNDER-SECRETARY OF DEFENSE FOR RESEARCH AND ENGINEERING, DEPARTMENT OF DEFENSE, ACCOMPANIED BY KENNETH R. FOSTER, STAFF DIRECTOR, MATERIALS POLICY, AND JACK ECK, STAFF SPECIALIST FOR MATERIALS

Dr. **WADE**. Thank you, Mr. Chairman, and members of the committee. I appreciate this opportunity to appear before you today to discuss the Defense Production Act of 1950. At the table with me is Mr. Kenneth Foster on my left, and on my right, Mr. Jack Eck from my office.

Extension of the Defense Production Act, now scheduled to expire September 30, 1983, is a pressing national issue and a matter of high defense priority. The Department of Defense requests a multiyear extension without revision.

To help provide the correct perspective needed to appreciate our request, we must recognize the important fact that the Defense Production Act provides the singular legislative foundation for establishing and maintaining a number of defense industrial readiness programs. Further, the Defense Production Act reflects the legislative fiber of this country's will to maintain a strong industrial capability. Indeed, the Defense Production Act's existence sends a signal to the world community that it is an essential ingredient of our deterrent strength.

At this time we are convinced that the industrial base will be capable of responding to increased levels of weapon system acquisition and logistics support and we rely on the continued availability of title I of the act to assure timely deliveries of needed industrial resources.

The title I provisions insure priority treatment of defense programs when necessary to meet scheduled production. In addition, our proposed title III program is for purchase commitments to establish or expand important domestic production capabilities under those extraordinary circumstances where the free market cannot respond in time to support national defense requirements.

COMMITMENTS MADE TO KEEP DEFENSE PRODUCTION ON SCHEDULE

Since the President and Secretary Weinberger have made commitments to keep defense production on schedule and within estimated costs, the legislative basis for these commitments must remain intact. In short, a lapse in the Defense Production Act, which constitutes the legislative foundation for establishment and enforcement of the title I industrial priorities system could indeed result in stretchouts in production contracts with accompanying cost growth and delays in achieving operational capabilities of the forces.

In addition, our title III program is being developed primarily to expand or establish necessary domestic production capabilities under extraordinary circumstances where we are unacceptably dependent upon foreign sources. Since title III programs are long term, loss of the Defense Production Act would negate any confidence in proposed development of essential production options even under extraordinary circumstances.

At this time, the Department of Defense is well into the beginning phase of developing practical title III programs to insure the viability of the defense industrial base so that our 5-year plan can be carried out effectively and efficiently. It will also improve mobilization preparedness. We plan to use only purchase commitments under title III to avoid any undue disruption to the credit market and to insure that the full costs of the project are taken into account.

Under a purchase commitment, the Department of Defense will agree to purchase a given amount of materials or items over a specific period of time at a negotiated price. A purchase commitment is a supply contract which is designed to assure the Government of a secure source of industrial processing capability for products critical to the national defense.

The Department of Defense is well into an intensified process of establishing a viable title III program. Much indeed remains to be finalized, once appropriations are received, to assure that the organizational aspects and acquisition procedures result in a fully effective and efficient operation. The following intermediate objectives are under review at this time:

OBJECTIVES UNDER REVIEW

Finalize a candidate project ranking system applicable to all defense agencies to assure that program resources are applied to projects resulting in optimum national security benefits;

Develop the means to insure that the sponsoring defense agencies use candidate project criteria when developing new candidate projects;

Develop and implement a uniform interdefense management system for title III projects;

Develop a recurrent title III program evaluation system to identify deficiencies for corrective action; and

Develop an annual reporting system on the use of funds on each title III project and the benefit obtained.

Currently, we have three draft requests for proposals released for review by prospective offerors. These title III candidate projects are: polyacrylonitrile-based carbon/graphite fibers, cobalt qualification and low-noise annular ball bearings. These important projects are necessary to support production and deployment of virtually our entire aerospace and nuclear submarine programs. These projects were selected under the following established criteria:

One, the project must be for an item that is essential to the national security of the United States;

Two, the free market cannot be reasonably expected to provide the needed capability in a timely manner;

Three, evaluation must demonstrate that purchase commitments under title III are the most cost-effective method for meeting the need assuming primary reliance on stockpile acquisition for materials;

Four, the U.S. national security demand must be equal to or greater than the output of the new domestic industrial capability;

Five, the title III project must be accomplished through purchase commitments only; and

Six, the product of the title III project must be identified in a specification agreed to by the U.S. Government and the contractor before contract award and the product must meet the specification.

We view our deliberate and orderly approach to the prudent use of title III authorities as one which establishes the parameters for direct defense needs and as a foundation upon which to base the defense need for any increased funding beyond the fiscal year 1984 request for $200 million.

PROVIDE ANNUALLY LIST OF INDUSTRY PROBLEM AREAS

We plan to annually provide the Congress with a list of industry sectoral problem areas for which candidate title III projects will be developed and a list of potential title III projects.

With these considerations, we believe the administration has moved out prudently in providing practical implementation of the provisions of the Defense Production Act with a comprehensive management plan and an appropriate funding level for title III and a reporting method for congressional oversight.

Mr. Chairman, the outstanding report of the Defense Production Base Panel of the House Committee on Armed Services, 96th Congress, on December 31, 1980, issued its finding regarding title III. The report stated:

> The United States has not effectively utilized Title III of the Defense Production Act of 1950, 50 U.S.C. App. 2061, which authorizes the government to expand domestic supply and productive capacity of vital resources and to explore for, develop and produce those domestic materials that could relieve the dependence on many foreign sources.

With our current title III initiative, the Department of Defense expresses clear recognition of the panel report finding with a posi-

tive step forward by requesting the required funding to support its responsibility.

This concludes my prepared statement. I will be pleased to respond to any questions the subcommittee may have.

[The complete statement follows:]

STATEMENT BY

DR. JAMES P. WADE, JR.

PRINCIPAL DEPUTY UNDER SECRETARY OF DEFENSE FOR RESEARCH AND ENGINEERING

MR. CHAIRMAN AND MEMBERS OF THE COMMITTEE, I APPRECIATE THIS OPPORTUNITY TO APPEAR BEFORE YOU TODAY TO DISCUSS THE DEFENSE PRODUCTION ACT OF 1950.

EXTENSION OF THE DEFENSE PRODUCTION ACT, NOW SCHEDULED TO EXPIRE SEPTEMBER 30, 1983, IS A PRESSING NATIONAL ISSUE AND A MATTER OF HIGH DEFENSE PRIORITY. THE DEPARTMENT OF DEFENSE REQUESTS A MULTIYEAR EXTENSION WITHOUT REVISION.

TO HELP PROVIDE THE CORRECT PERSPECTIVE NEEDED TO APPRECIATE OUR REQUEST, WE MUST RECOGNIZE THE IMPORTANT FACT THAT THE DEFENSE PRODUCTION ACT PROVIDES THE SINGULAR LEGISLATIVE FOUNDATION FOR ESTABLISHING AND MAINTAINING A NUMBER OF DEFENSE INDUSTRIAL READINESS PROGRAMS. FURTHER, THE DEFENSE PRODUCTION ACT REFLECTS THE LEGISLATIVE FIBER OF THIS COUNTRY'S WILL TO MAINTAIN A STRONG INDUSTRIAL CAPABILITY. INDEED, THE DEFENSE PRODUCTION ACT'S EXISTENCE SENDS A SIGNAL TO THE WORLD COMMUNITY THAT IT IS AN ESSENTIAL INGREDIENT OF OUR DETERRENT STRENGTH.

AT THIS TIME WE ARE CONVINCED THAT THE INDUSTRIAL BASE WILL BE CAPABLE OF RESPONDING TO INCREASED LEVELS OF WEAPON SYSTEM ACQUISITION AND LOGISTICS SUPPORT AND WE RELY ON THE CONTINUED AVAILABILITY OF TITLE I OF THE ACT TO ASSURE TIMELY DELIVERIES OF NEEDED INDUSTRIAL RESOURCES. THE TITLE I PROVISIONS ENSURE PRIORITY TREATMENT OF DEFENSE PROGRAMS WHEN NECESSARY TO MEET SCHEDULED PRODUCTION. IN ADDITION, OUR PROPOSED TITLE III PROGRAM IS FOR PURCHASE COMMITMENTS TO

ESTABLISH OR EXPAND IMPORTANT DOMESTIC PRODUCTION CAPABILITIES UNDER THOSE EXTRAORDINARY CIRCUMSTANCES WHERE THE FREE MARKET CANNOT RESPOND IN TIME TO SUPPORT NATIONAL DEFENSE REQUIREMENTS.

SINCE THE PRESIDENT AND SECRETARY WEINBERGER HAVE MADE COMMITMENTS TO KEEP DEFENSE PRODUCTION ON SCHEDULE AND WITHIN ESTIMATED COSTS, THE LEGISLATIVE BASIS FOR THESE COMMITMENTS MUST REMAIN INTACT. IN SHORT, A LAPSE IN THE DEFENSE PRODUCTION ACT, WHICH CONSTITUTES THE LEGISLATIVE FOUNDATION FOR ESTABLISHMENT AND ENFORCEMENT OF THE TITLE I INDUSTRIAL PRIORITIES SYSTEM COULD RESULT IN STRETCHOUTS IN PRODUCTION CONTRACTS WITH ACCOMPANYING COST GROWTH AND DELAYS IN ACHIEVING OPERATIONAL CAPABILITIES OF THE FORCES. IN ADDITION, OUR TITLE III PROGRAM IS BEING DEVELOPED PRIMARILY TO EXPAND OR ESTABLISH NECESSARY DOMESTIC PRODUCTION CAPABILITIES UNDER EXTRAORDINARY CIRCUMSTANCES WHERE WE ARE UNACCEPTABLY DEPENDENT UPON FOREIGN SOURCES. SINCE TITLE III PROGRAMS ARE LONG TERM, LOSS OF THE DEFENSE PRODUCTION ACT WOULD NEGATE ANY CONFIDENCE IN PROPOSED DEVELOPMENT OF ESSENTIAL DOMESTIC PRODUCION OPTIONS EVEN UNDER EXTRAORDINARY CIRCUMSTANCES.

AT THIS TIME, THE DEPARTMENT OF DEFENSE IS WELL INTO THE BEGINNING PHASE OF DEVELOPING PRACTICAL TITLE III PROGRAMS TO ENSURE THE VIABILITY OF THE DEFENSE INDUSTRIAL BASE SO THAT OUR FIVE-YEAR PLAN CAN BE CARRIED OUT EFFECTIVELY AND EFFICIENTLY. IT WILL ALSO IMPROVE MOBILIZATION PREPAREDNESS. WE PLAN TO USE ONLY PURCHASE COMMITMENTS UNDER TITLE III TO AVOID ANY UNDUE

DISRUPTION TO THE CREDIT MARKET AND TO ENSURE THAT THE FULL COSTS OF THE PROJECT ARE TAKEN INTO ACCOUNT. UNDER A PURCHASE COMMITMENT, THE DEPARTMENT OF DEFENSE WILL AGREE TO PURCHASE A GIVEN AMOUNT OF MATERIALS OR ITEMS OVER A SPECIFIC PERIOD OF TIME AT A NEGOTIATED PRICE. A PURCHASE COMMITMENT IS A SUPPLY CONTRACT WHICH IS DESIGNED TO ASSURE THE GOVERNMENT OF A SECURE SOURCE OF INDUSTRIAL PROCESSING CAPABILITY FOR PRODUCTS CRITICAL TO THE NATIONAL DEFENSE.

THE DEPARTMENT OF DEFENSE IS WELL INTO AN INTENSIFIED PROCESS OF ESTABLISHING A VIABLE TITLE III PROGRAM. MUCH REMAINS TO BE FINALIZED, ONCE APPROPRIATIONS ARE RECEIVED, TO ASSURE THAT THE ORGANIZATIONAL ASPECTS AND ACQUISITION PROCEDURES RESULT IN A FULLY EFFECTIVE AND EFFICIENT OPERATION. THE FOLLOWING INTERMEDIATE OBJECTIVES ARE UNDER REVIEW AT THIS TIME:

- FINALIZE A CANDIDATE PROJECT RANKING SYSTEM APPLICABLE TO ALL DEFENSE AGENCIES TO ASSURE THAT PROGRAM RESOURCES ARE APPLIED TO PROJECTS RESULTING IN OPTIMUM NATIONAL SECURITY BENEFITS.

- DEVELOP THE MEANS TO ENSURE THAT THE SPONSORING DEFENSE AGENCIES USE CANDIDATE PROJECT CRITERIA WHEN DEVELOPING NEW PROJECTS.

- DEVELOP AND IMPLEMENT A UNIFORM INTER-DEFENSE MANAGEMENT SYSTEM FOR TITLE III PROJECTS.

o DEVELOP A RECURRENT TITLE III PROGRAM EVALUATION SYSTEM TO IDENTIFY DEFICIENCIES FOR CORRECTIVE ACTION.

o DEVELOP AN ANNUAL REPORTING SYSTEM ON THE USE OF FUNDS ON EACH TITLE III PROJECT AND THE BENEFIT OBTAINED.

CURRENTLY WE HAVE THREE DRAFT REQUESTS FOR PROPOSALS RELEASED FOR REVIEW BY PROSPECTIVE OFFERORS. THESE TITLE III CANDIDATE PROJECTS ARE: POLYACRYLONITRILE-BASED CARBON/GRAPHITE FIBERS, COBALT QUALIFICATION AND LOW NOISE ANNULAR BALL BEARINGS. THESE IMPORTANT PROJECTS ARE NECESSARY TO SUPPORT PRODUCTION AND DEPLOYMENT OF VIRTUALLY OUR ENTIRE AEROSPACE AND NUCLEAR SUBMARINE PROGRAMS. THESE PROJECTS WERE SELECTED UNDER THE FOLLOWING ESTABLISHED CRITERIA.

1. THE PROJECT MUST BE FOR AN ITEM THAT IS ESSENTIAL TO THE NATIONAL SECURITY OF THE UNITED STATES.

2. THE FREE MARKET CANNOT BE REASONABLY EXPECTED TO PROVIDE THE NEEDED CAPABILITY IN A TIMELY MANNER.

3. EVALUATION MUST DEMONSTRATE THAT PURCHASE COMMITMENTS UNDER TITLE III ARE THE MOST COST-EFFECTIVE METHOD FOR MEETING THE NEED ASSUMING PRIMARY RELIANCE ON STOCKPILE ACQUISITION FOR MATERIALS.

4. THE UNITED STATES NATIONAL SECURITY DEMAND MUST BE EQUAL TO OR GREATER THAN THE OUTPUT OF THE NEW DOMESTIC INDUSTRIAL CAPABILITY.

5. THE TITLE III PROJECT MUST BE ACCOMPLISHED THROUGH PURCHASE COMMITMENTS ONLY.

6. THE PRODUCT OF THE TITLE III PROJECT MUST BE IDENTIFIED IN A SPECIFICATION AGREED TO BY THE UNITED STATES GOVERNMENT AND THE CONTRACTOR BEFORE CONTRACT AWARD AND THE PRODUCT MUST MEET THE SPECIFICATIONS.

WE VIEW OUR DELIBERATE AND ORDERLY APPROACH TO THE PRUDENT USE OF TITLE III AUTHORITIES AS ONE WHICH ESTABLISHES THE PARAMETERS FOR DIRECT DEFENSE NEEDS AND AS A FOUNDATION UPON WHICH TO BASE THE DEFENSE NEED FOR ANY INCREASED FUNDING BEYOND THE FISCAL YEAR 1984 REQUEST FOR $200 MILLION.

WE PLAN TO ANNUALLY PROVIDE THE CONGRESS WITH A LIST OF INDUSTRY SECTORAL PROBLEM AREAS FOR WHICH CANDIDATE TITLE III PROJECTS WILL BE DEVELOPED AND A LIST OF POTENTIAL TITLE III PROJECTS.

WITH THESE CONSIDERATIONS, WE BELIEVE THE ADMINISTRATION HAS MOVED OUT PRUDENTLY IN PROVIDING PRACTICAL IMPLEMENTATION

OF THE PROVISIONS OF THE DEFENSE PRODUCTION ACT WITH A COMPREHENSIVE MANAGEMENT PLAN AND AN APPROPRIATE FUNDING LEVEL FOR TITLE III AND A REPORTING METHOD FOR CONGRESSIONAL OVERSIGHT.

MR. CHAIRMAN, THE OUTSTANDING REPORT OF THE DEFENSE INDUSTRIAL BASE PANEL OF THE HOUSE COMMITTEE ON ARMED SERVICES, 96th CONGRESS, ON DECEMBER 31, 1980, ISSUED ITS FINDING REGARDING TITLE III. THE REPORT STATED "THE UNITED STATES HAS NOT EFFECTIVELY UTILIZED TITLE III OF THE DEFENSE PRODUCTION ACT OF 1950 (50 U.S.C. APP. 2061), WHICH AUTHORIZES THE GOVERNMENT TO EXPAND DOMESTIC SUPPLY AND PRODUCTIVE CAPACITY OF VITAL RESOURCES AND TO EXPLORE FOR, DEVELOP AND PRODUCE THOSE DOMESTIC MATERIALS THAT COULD RELIEVE THE DEPENDENCE ON MANY FOREIGN SOURCES." WITH OUR CURRENT TITLE III INITIATIVE, THE DEPARTMENT OF DEFENSE EXPRESSES CLEAR RECOGNITION OF THE PANEL REPORT FINDING WITH A POSITIVE STEP FORWARD BY REQUESTING THE REQUIRED FUNDING TO SUPPORT ITS RESPONSIBILITY.

THIS CONCLUDES MY PREPARED STATEMENT. I WILL BE PLEASED TO RESPOND TO ANY QUESTIONS THE SUBCOMMITTEE MAY HAVE.

Senator **Trible**. I thank you very much.

Congress authorized DOD to program up to $50 million for fiscal year 1983. DOD has now requested an additional $200 million in 1984 to implement its hopes and aspirations in title III.

My question is this: I have been informed by GAO that of the $50 million authorized to be reprogramed in fiscal year 1983, the Army, Navy, and Air Force have only $6 million reserved for one project each. Furthermore, two of those three projects are contingent upon fiscal year 1984 appropriations totaling $49 million.

FAILURE TO USE LION'S SHARE OF APPROPRIATIONS

It would suggest to me that where the Department of Defense has failed to use the lion's share of the dollars authorized and appropriated today, that perhaps the Department of Defense is not prepared to implement its programs with regard to the extra $200 million sought for the fiscal year 1984 timeframe.

Your thoughts?

Dr. **Wade**. First of all, Mr. Chairman, I would like to note, as I mentioned in my statement, that the Department is proceeding cautiously in putting together a program with a foundation that will have the full support of the Congress, and the American people, before we proceed. In this light, our first steps have been to ask the three services, looking toward a set of initial proposals upon which we can evaluate the system, and evaluate the criteria and thereby present the Congress with a program that everyone can support.

We have gone out looking toward, as I said before, the purchase of PAN materials which really has vital bearing on the whole aerospace industry; noise-quiet bearings which have an application throughout the functioning of our nuclear-powered submarines, and a cobalt qualification program.

We do have a listing of 18 other projects which we are now evaluating; but it is important that we start correctly and make sure we present a solid case to Congress.

Senator **Trible**. I could not agree more.

Now, you have identified three areas where you would like to proceed.

Dr. **Wade**. Yes, sir.

Senator **Trible**. What will it cost to implement those three projects?

Dr. **Wade**. Senator, at this time we do not know what the cost will be. Once the RFP's are on the street and we obtain the returns from industry, we will have a better idea of what the realistic cost will be. Right now, we can only estimate. In our letter on the 1984 projects, there are estimated values. We have not had firm returns from industry in response to what we want to do, that we can use to cost the program out.

Senator **Trible**. And what are the estimated costs?

Mr. **Eck**. For 1983, sir, or 1984?

Senator **Trible**. Whatever. Give me your most current assessment, what they would cost.

Mr. **Eck**. I would have to look. I am sorry, I do not have that now. I would have to get it to you and supply it for the record.

[Information for the record follows:]

MOST CURRENT ASSESSMENT OF ESTIMATED TITLE III PROJECT COSTS

Question. Whatever. Give me your most current assessment, what they would cost?

Answer. The total estimated expenditure for DoD Title III projects for Fiscal Year 1983 is $5 million.

Senator TRIBLE. Well, the figures I have before me suggest it is $25 million, $25 million, and $20 million in one document. And another document, $49 million and $55 million. That does not add up to——

Mr. ECK. Sir, are you talking of the 1983 or 1984 appropriations? Utilizing the fiscal year 1983 appropriations we issued three draft RFP's basically to get this program started.

Now, in 1984 we submitted a list of projects that totalled—two lists, by the way—we consider level I projects and level II projects. The total maximum value of the level I projects I think was $310 million.

Senator TRIBLE. All right. Well, let's go through one more time. For fiscal year 1983, $50 million have been reprogramed for this purpose?

Dr. WADE. Yes, sir.

Senator TRIBLE. All right. And is it from that $50 million that you intend to pay for the three title III projects enumerated in your testimony, Mr. Secretary?

Dr. WADE. Yes, sir.

Senator TRIBLE. For the current fiscal year?

Dr. WADE. Yes, sir. And our estimate at this time, for example, on the noise-quiet bearings, is $1 million, to start the program. For cobalt qualification, we need the response back from industry because the cost of this project is changing in the economy; it might well be on the order of $2 million just to start that program. On PAN, which is the carbon fiber program, I believe we can estimate less than $10 million.

These are just three initial programs, and they're well under the $50 million that we are prepared to reprogram. We also have a list of 18 additional projects.

Senator TRIBLE. What troubles me here is that obviously it is your intention to move forward slowly, prudently——

Dr. WADE. Yes, sir.

Senator TRIBLE. And I think that is in our national interest and clearly in the best interests of the defense program that we all want to implement that philosophy reflected in the decisions that you have made to implement the three programs and move forward cautiously there.

It is reflected further in the fact that of the $50 million reprogramed to date, only $6 million of those dollars have been targeted for specific purposes.

Recognizing all that is true, it seems to me premature for the Department of Defense to request $200 million in the next fiscal year when you have not allocated $46 million that you have in your current fiscal year, and you are moving forward slowly, by your own statement. How in the world are you going to responsibly use $200 million more?

Now, I know that is not much money in terms of DOD, but I regard that as a substantial sum of money nevertheless.

Dr. WADE. There is no question about that, Mr. Chairman. Let me address this aspect in general terms, and then go to some more specifics. The studies, analyses, and followup testimony presented to the Congress over the last several years have certainly indicated the importance of our defense industrial base, the importance for the Department to be able to expand its production capacity in a time of emergency. I do not think we have any difference in views here.

CAUTION IN STARTING EXPANSION PROGRAMS

We have started this program slowly to get our hands on the details, to understand all the difficulties, and to formulate the right criteria on which we could basically have sound management techniques.

Let me list the additional projects. In addition to the three programs I talked about earlier, we are addressing high-quality optical glass, optical materials needed in many programs of the Department of Defense; metallic beryllium, an important product for our ballistic missile systems; generic traveling wave tubes, a product that is needed throughout our airborne and satellite systems; metallized glass chaff, necessary for countermeasures. We have seen this need, for example, in the Falkland Islands, important for our tactical forces; ammonium perchlorate, a missile fuel needed by the Army.

We are further looking at high-purity silicon, which is needed in all our electronic programs; and mercury cadmium telluride, which has been in short supply for the last 4 or 5 years; and materials that go in gun barrels.

We have a series of additional topics of this kind, all important. I think the understanding as to the need for additional domestic capability is here. And right now, we are starting slow but we hate to put this program off for another 10 months. So I agree with you that there is a certain amount of uneasiness in the context of a specific total program.

But we feel quite confident that this program will properly pull together. We will have to come forward again in the context of receiving your final approval of our aggregate list—you will have that final approval oversight on this program—and we believe that the process right now is reasonably ready to proceed forward.

Senator TRIBLE. What I would like to do is read to you a statement from the General Accounting Office. This statement will be delivered in just a few minutes. And I think it sets forth the issue at hand, an issue that I want to pursue in closed session in a few minutes. We cannot talk precisely about these particular programs because they are security-sensitive.

However, I want to keep the session open as long as I can, but I want to simply read to you from the draft statement of the General Accounting Office. And what I would propose, Dr. Wade, is that we will put this question aside for a few moments and we will permit the General Accounting Office witness to present his broad testimony which speaks to this question and others, and then I would ask you and your counterpart from the General Accounting Office to discuss these particular questions.

But for the record, and to frame the issue, let me simply quote from the statement of the General Accounting Office:

> Army, Navy and Air Force officials we contacted believed that they were not provided the time necessary to ensure that the projects they proposed met the criteria developed by DoD and OMB. These Services and the Defense Logistics Agency were given only three days to submit proposed projects. Furthermore, the projects submitted by the Services were not rigorously reviewed within DoD, and DoD's fiscal year 1984 Title III budget request was not subjected to OMB's normal budget hearing process.

Now let me read the section preceding that:

> In general, we found that DoD's projects do not adequately justify the national security benefits to be derived and/or the economic costs associated with the Federal subsidy. For six of the projects, a weakness in the defense industrial base had not been identified. Moreover, the cost-effectiveness of Title III compared to other alternatives was not adequately justified for any of the nine projects.

Now, I am not going to ask you to respond to that at this point. I simply want to frame the issue that I would like to pursue with you and Mr. Boland in a matter of moments, and what I would propose is that at that time we will speak specifically about each program initiative and its merits.

I would say at this point that before my election to the U.S. Senate I served on the House Armed Services Committee for 6 years. I was an active member of the Subcommittee on Seapower and Strategic and Critical Materials. I recognize the national requirements.

I am deeply concerned, however, that this request has not been given adequate time and preparation and is premature. And that is what I want to investigate as we turn to these questions in a few moments.

Now, Dr. Wade, I had one question, or two questions, that Senator Dodd asked me to propound to you. And so in order to honor my commitment to my colleague from Connecticut, let me propose those two questions:

WHY NOT BUY AMERICAN?

First, if the Government wishes contractors to assume investment risks, why does it not simply require the prime contractors to buy American and assess the market reaction to that decision?

Dr. **Wade**. Sir, could you repeat that?

Senator **Trible**. If the Government wishes contractors to assume the investment risk, why doesn't it simply require its prime contractors to buy American and assess the market's reaction to that decision?

Mr. **Foster**. I'd like to go back to that question.

Senator **Trible**. Would you identify yourself for the record?

Mr. **Foster**. My name is Ken Foster. I'm Staff Director for Materials Policy.

Let's use the three programs we have right now as examples. We could, for example, using PAN, say, to our contractors, "Buy American." Who would we buy from? Currently all PAN-based fiber comes from Japan. We are trying to establish that domestic source, so they do have somebody to buy from. We have approximately 80 billion dollars' worth of aircraft in our plans to purchase. None of the PAN to be used in those aircraft so far would come from domestic sources. We don't have a qualified domestic source. We need the fiber to fly our aircraft faster and carry a greater payload to maintain an advantage over our adversaries. It is a mission-based requirement.

Senator TRIBLE. All right, sir.

Now, the second question posed by my colleague from Connecticut, Senator Dodd, is the following:

Even though the draft RFP states the Government does not intend to pay for the facilities, payment of a differential subsidy will, in fact, do that. Is that fair to contractors who have existed and subsidized investment in a domestic facility? How will the RFP protect existing investment from competitive injury?

Mr. ECK. Sir, I would like to respond.

Senator TRIBLE. All right, sir, if you will identify yourself and your title. What do you do, for the record?

Mr. ECK. My name is Jack Eck. I'm a Staff Specialist for Materials.

Senator TRIBLE. Thank you, sir.

Mr. ECK. The draft RFP's that have gone out to purchase material do not prevent any existing source from supplying that material. In fact, I would have to assume that the existing sources would have a competitive edge over any new facilities that would be established. The intent is to increase the capability of what is there or to have it redesigned in such a way that it meets our specific requirements. The RFP's are not targeted to establish a new facility. If there is one there that can meet the requirement, it will be evaluated in a competitive manner, and I would have to assume the existing source would be far in advance of somebody that had to establish a new capability.

Senator TRIBLE. All right. I thank you for those responses, and Senator Dodd can pursue those matters, if he wishes, for the record, and we may submit additional questions on this and other matters, for your attention.

What I would like you to do then, Dr. Wade, is to step aside, if you would, for a few moments and we will turn next to Kevin Boland, Senior Associate Director, Resources Community and Economic Development with the General Accounting Office.

Mr. Boland is welcome here, and your team.

Let me interrupt the proceedings for a moment. Is Mr. Maguire here?

All right. Let me say, this proceeding began at 9:30 this morning, and this Senator expects the witnesses to be here on time just as the Chair is in session here on time. I know there was some discussion with the staff, and the staff was advised that Mr. Maguire would arrive after the hour. The hour has come and passed, and I would accept Mr Maguire's written statement for the record. I regret not hearing from him in person today.

Mr. MAGUIRE. Senator, I am present.

Senator Trible. All right. I didn't see you at 9:30, and I'm glad to see see you at 10:30. We will accept your testimony. We will make it part of the record, and we appreciate your presence here today.

BERNARD A. MAGUIRE, ASSOCIATE DIRECTOR FOR NATIONAL PREPAREDNESS PROGRAMS, FEDERAL EMERGENCY MANAGEMENT AGENCY

[The complete statement follows:]

STATEMENT OF THE HONORABLE BERNARD A. MAGUIRE
ASSOCIATE DIRECTOR FOR NATIONAL PREPAREDNESS PROGRAMS
FEDERAL EMERGENCY MANAGEMENT AGENCY
BEFORE THE
COMMITTEE ON BANKING, HOUSING, AND URBAN AFFAIRS
UNITED STATES SENATE
SEPTEMBER 15, 1983

MR. CHAIRMAN AND MEMBERS OF THE COMMITTEE. THANK YOU FOR THIS OPPORTUNITY TO DISCUSS WITH YOU THE IMPORTANCE OF THE DEFENSE PRODUCTION ACT OF 1950 TO OUR NATIONAL PREPAREDNESS. EXECUTIVE ORDER 10480, WHICH IMPLEMENTS THE DEFENSE PRODUCTION ACT, SPECIFICALLY CHARGES FEMA WITH THE RESPONSIBILITY FOR COORDINATING MOBILIZATION ACTIVITIES OF THE EXECUTIVE BRANCH OF THE GOVERNMENT INCLUDING ACTIVITIES RELATED TO PRODUCTION, PROCUREMENT, ENERGY, AND TRANSPORT. THE DEFENSE PRODUCTION ACT IS A VITAL PART OF OUR EFFORTS FOR MAINTAINING A STRONG AND RESPONSIVE DEFENSE INDUSTRIAL BASE TO RESPOND TO NATIONAL SECURITY EMERGENCIES.

THE DEFENSE PRODUCTION ACT OF 1950 IS ONE OF THE KEYSTONE AUTHORITIES FOR EMERGENCY PLANNING AND PREPAREDNESS AND PROVIDES THE STATUTORY BASIS FOR MOBILIZATION READINESS OF THE NATION'S INDUSTRIAL AND MATERIAL RESOURCES. CONTINUATION OF THESE AUTHORITIES IS ESSENTIAL TO THE NATIONAL DEFENSE. WE STRONGLY SUPPORT A 5-YEAR EXTENSION OF THESE VITAL AUTHORITIES. WE ALSO STRONGLY OPPOSE H.R. 3712 WHICH PROPOSES A NUMBER OF UNNECESSARY SUBSTANTIVE CHANGES AND EXCESSIVE FUNDING LEVELS.

TITLE I IS THE UNIQUE AUTHORITY FOR THE DEFENSE PRIORITIES AND ALLOCATION SYSTEM WHICH IS FUNDAMENTAL TO MAINTAINING SCHEDULES FOR DEFENSE PRODUCTION

WITH INHERENT COST ADVANTAGES TO THE TAXPAYERS. THIS OPERATIONAL SYSTEM ALSO PROVIDES THE BASIS FOR ORDERLY RAPID EXPANSION OF DEFENSE PRODUCTION IN A NATIONAL SECURITY EMERGENCY. TITLE III PROVIDES AUTHORITY FOR EXPANSION OF INDUSTRY TO EXPEDITE PRODUCTION AND DELIVERIES UNDER DEFENSE CONTRACTS. TITLE VII AUTHORIZES THE PRESIDENT TO ESTABLISH A NUCLEUS EXECUTIVE RESERVE FOR EMPLOYMENT DURING PERIODS OF EMERGENCY AND TO CONSULT WITH REPRESENTATIVES OF INDUSTRY, BUSINESS, FINANCING, AGRICULTURE, LABOR, AND OTHER INTERESTS FOR THE MAKING OF VOLUNTARY AGREEMENTS TO HELP PROVIDE FOR THE DEFENSE OF THE UNITED STATES. TITLE VII ALSO CONTAINS DEFINITIONS AND ADMINISTRATIVE PROVISIONS THAT ESTABLISH THE PARAMETERS OF AUTHORIZED PROGRAMS AND ASSURE COMPLIANCE.

THESE AUTHORITIES DIRECTLY SUPPORT THE DECLARATION OF POLICY IN A MANNER THAT LEAVES NO DOUBT ABOUT THE INTENT OF THE CONGRESS TO PROVIDE FOR OUR NATIONAL DEFENSE. A 5-YEAR SIMPLE EXTENSION OF THE EXISTING DEFENSE PRODUCTION ACT WILL CLEARLY DEMONSTRATE THE NATIONAL COMMITMENT TO MOBILIZATION OF THE NATION'S RESOURCES IN AN EMERGENCY. IN ADDITION, A 5-YEAR EXTENSION OF THE DEFENSE PRODUCTION ACT PROVIDES CONTINUITY TO DEFENSE PREPAREDNESS PROGRAMS, STRENGTHENS LONG-TERM PREPAREDNESS PLANNING, CONTRIBUTES TO EFFECTIVE MANAGEMENT OF THE PREPAREDNESS PROGRAMS, PROVIDES COST ADVANTAGES, AND DEMONSTRATES A FIRM NATIONAL COMMITMENT TO MAINTAIN THE RESPONSIVENESS OF THE DEFENSE INDUSTRIAL BASE.

THE AUTHORITIES IN THE ACT ARE USED ON A DAILY BASIS FOR MAINTAINING OUR DEFENSE POSTURE AND MORE IMPORTANTLY, SUPPORT MANY VITAL DEFENSE AND DEFENSE PRODUCTION PROGRAMS. I WOULD LIKE TO HIGHLIGHT SOME OF THESE KEY PROGRAMS.

PRIORITIES FOR MATERIALS AND EQUIPMENT

CONTRACTORS DEVELOP PRODUCTION SCHEDULES BASED ON ASSURANCE OF OBTAINING MATERIALS, COMPONENTS, AND OTHER NECESSITIES THROUGH EXTENSIONS OF PRIORITIES ON THEIR PRIME DEFENSE CONTRACTS. THIS HELPS INSURE THAT DEFENSE PROGRAMS STAY WITHIN ESTIMATED COSTS BY MAINTAINING PRODUCTION SCHEDULES.

IN ADDITION TO CURRENT BENEFITS, THE DEFENSE PRODUCTION ACT ALSO PROVIDES AN "INSURANCE" ELEMENT THAT MAKES POSSIBLE RESPONSE OF THE DEFENSE INDUSTRIAL BASE TO EMERGENCY REQUIREMENTS OF MOBILIZATION OR WAR IN MINIMUM TIME. DURING WORLD WAR II, 18 MONTHS OF COSTLY DELAYS ELAPSED BEFORE A PRIORITIES SYSTEM BECAME EFFECTIVE. DURING THE KOREAN WAR, 12 MONTHS PASSED BEFORE A PRIORITIES SYSTEM BECAME EFFECTIVE. TODAY, WE HAVE GOVERNMENT PERSONNEL AT POLICY AND OPERATING LEVELS. CONTRACTING OFFICERS AND PRODUCTION OFFICERS EXERCISE THE AUTHORITIES ON CURRENT DEFENSE PROGRAMS. CONTRACTORS, SUBCONTRACTORS, AND SUPPLIERS UNDERSTAND THE AUTHORITIES AND RESPONSIBILITIES ASSOCIATED WITH DEFENSE (PRIORITY) ORDERS. THE COMPLETE SYSTEM IS IN OPERATION TO MEET CURRENT DEFENSE NEEDS AS WELL AS FOR THE EVENTUALITY OF A NATIONAL SECURITY EMERGENCY.

PRIORITIES FOR STRATEGIC MOBILITY

THE PLANNED DEPLOYMENT OF MILITARY FORCES IN A MAJOR EMERGENCY IS DEPENDENT ON TRANSPORTATION ASSETS MADE AVAILABLE FOR DEFENSE USE UNDER TITLE I AUTHORITIES. THESE ASSETS INCLUDE THE CIVIL RESERVE AIRCRAFT FLEET (CRAF), CONTINGENCY RESPONSE PROGRAM (CORE), AND OTHER RAPID RESPONSE

DEPLOYMENT PLANS. CRAF IS A COOPERATIVE PLAN BETWEEN THE SECRETARY OF DEFENSE AND THE CIVIL AIR CARRIER INDUSTRY TO AUGMENT DEPARTMENT OF DEFENSE'S CAPABILITY IN THE EVENT OF A DEPLOYMENT EMERGENCY. UNDER THE PROGRAM, CRAF AIRCRAFT WILL CONTINUE TO BE PRIVATELY OWNED AND OPERATED UNDER DOD MISSION CONTROL. THE CRAF PROGRAM CONSISTS OF THREE STAGES. STAGE III INCLUDES ALL THE AIRCRAFT IN THE PROGRAM AND STAGES II AND I EMBRACE PROGRESSIVELY LESSER NUMBERS OF AIRCRAFT, BASED UPON PLANS APPROVED BY THE JOINT CHIEFS OF STAFF. CRAF STAGE III INCLUDES VIRTUALLY ALL UNITED STATES INTERNATIONAL CAPABLE CIVIL CARGO AIRCRAFT. IT ALSO INCLUDES A LARGE PERCENTAGE OF UNITED STATES INTERNATIONAL CAPABLE PASSENGER AIRCRAFT. ALL CIVIL AIR CARRIER AIRCRAFT CURRENTLY COMMITTED TO CRAF STAGE III MAY BE ALLOCATED IN A DEFENSE EMERGENCY PURSUANT TO THE PROVISIONS OF TITLE I OF THE DEFENSE PRODUCTION ACT.

CORE IS A DOD PROGRAM TO PROVIDE CIVIL TRANSPORTATION SUPPORT AND PRIORITY FOR RAPID DEPLOYMENT IN ANTICIPATION OF AND DURING A NATIONAL DEFENSE EMERGENCY. THE CORE PROGRAM QUICK REACTION PROCEDURES ARE DESIGNED TO REDUCE THE TIME REQUIRED TO MUSTER CIVIL RAIL, MOTOR BUS, AND AIR ASSETS TO INCLUDE CONTAINERS, TERMINAL SERVICE, FACILITIES, AND EQUIPMENT TO MEET DOD PRIORITY REQUIREMENTS AND RESOLVE SERVICE SHORTFALLS. THE ACTION ARM OF THE PROGRAM IS THE CORE TEAM COMPRISED OF KEY OFFICIALS OF THE DOD, DOT, FEMA, AND OTHER FEDERAL AGENCIES, THE COMMERCIAL TRANSPORTATION INDUSTRY AND STATE TRANSPORTATION OFFICIALS.

MACHINE TOOL TRIGGER ORDER PROGRAM

THE BASIC AUTHORITY FOR THE ESTABLISHMENT AND MAINTENANCE OF THE MACHINE TOOL TRIGGER ORDER PROGRAM IS TITLE III OF THE DEFENSE PRODUCTION ACT. TO DATE, 91 COMPANIES HAVE BEEN INVITED TO PARTICIPATE AND TWO THIRDS OF THESE STANDBY AGREEMENTS HAVE BEEN SIGNED (61 AGREEMENTS) COVERING 5555 ITEMS WITH CONTRACT VALUES OF $791 MILLION. THE PROGRAM IS A GOVERNMENT/INDUSTRY COOPERATIVE EFFORT TO CUT MOBILIZATION LEAD-TIMES BY SPEEDING DELIVERY OF MACHINE TOOLS ESSENTIAL TO DEFENSE PRODUCTION. WITHOUT THIS ACT, THE PROGRAM WOULD HAVE TO BE TERMINATED AND EXISTING STANDBY PURCHASE STANDBY AGREEMENTS CANCELLED.

CRITICAL INDUSTRIAL CAPACITY FOR MOBILIZATION

UNDER TITLE III, THE DOD GUAYULE LOAN GUARANTEE PROJECT IS EXPLORING THE POTENTIAL FOR A DOMESTIC MATERIAL RUBBER INDUSTRY. IN ADDITION, FEMA AND DOD HAVE BEEN WORKING CLOSELY IN IDENTIFYING HIGH PRIORITY INDUSTRIAL CAPACITY AND MATERIAL CONSTRAINTS IN MOBILIZATION. WITH FURTHER ANALYSIS, SOME OF THESE CRITICAL INDUSTRIAL CONSTRAINTS MAY BE EXCELLENT CANDIDATE PROJECTS FOR TITLE III PURCHASE GUARANTEES, AND COULD RECEIVE PURCHASE GUARANTEES UNDER THE DOD'S 1984 TITLE III REQUEST FOR $200 MILLION.

NATIONAL DEFENSE EXECUTIVE RESERVE (NDER)

UNDER TITLE VII OF THE ACT, 11 NDER UNITS HAVE BEEN SPONSORED BY THE DEPARTMENTS OF DEFENSE, INTERIOR, COMMERCE, LABOR,-HOUSING AND URBAN DEVELOPMENT, TRANSPORTATION AND ENERGY, THE INTERSTATE COMMERCE COMMISSION AND FEMA. THE EXPIRATION OF THE ACT WOULD REQUIRE THE DISBANDMENT OF THESE UNITS AND THE RESERVE MEMBERSHIP TERMINATED BY THE DEPARTMENTS AND AGENCIES WITH THE RESULTING DISPERSAL OF TALENT AND EXPERIENCE NECESSARY FOR ADEQUATE MOBILIZATION PREPAREDNESS.

SUMMARY

IF THE ACT WERE ALLOWED TO EXPIRE, THESE IMPORTANT PROGRAMS WOULD BE LOST AND PRODUCTION SCHEDULES COULD BE AFFECTED. IN THE EVENT OF A NATIONAL SECURITY EMERGENCY, DEFENSE PRODUCTION COULD BE JEOPARDIZED WHILE THE GOVERNMENT ATTEMPTS TO REINSTATE A PRIORITIES AND ALLOCATIONS SYSTEM. NEW LEGISLATION WOULD BE NEEDED TO AUTHORIZE GOVERNMENT PROGRAMS FOR EXPANSION OF INDUSTRY TO MEET DEFENSE REQUIREMENTS. THE LOSS OF THE NATIONAL DEFENSE EXECUTIVE RESERVE WOULD REQUIRE RECRUITMENT OF A HIGH LEVEL MANAGEMENT AND TECHNICAL EXPERTISE AT A TIME WHEN INDUSTRY WOULD BE ENGAGED IN MAJOR EFFORTS TO RECRUIT SIMILAR SKILLS. THE GOVERNMENT WOULD BE UNABLE TO USE THE COMBINED EFFORTS OF INDUSTRY TO DEVELOP NEW SOLUTIONS TO PRODUCTION CONSTRAINTS WHERE THERE IS THE THREAT OF ANTITRUST ACTIONS. FINALLY, THE MACHINE TOOL STANDBY AGREEMENTS FOR EMERGENCY PREAPREDNESS WOULD NOT BE VALID.

THE FEDERAL EMERGENCY MANAGEMENT AGENCY STRONGLY SUPPORTS THE LEGISLATION PROPOSED BY THE ADMINISTRATION FOR A 5-YEAR EXTENSION OF THE DEFENSE PRODUCTION ACT OF 1950. EXTENSION OF THE DEFENSE PRODUCTION ACT FOR 5 YEARS WILL REINSTATE CONGRESSIONAL DECLARATION THAT THE UNITED STATES WILL MAINTAIN WHATEVER MILITARY AND ECONOMIC STRENGTH IS FOUND NECESSARY TO PROMOTE PEACE AMONG NATIONS. AGAIN, I WOULD LIKE TO MENTION THAT FEMA STRONGLY OPPOSES H.R. 3712. WE HAVE BEEN ADVISED THAT ITS ENACTMENT WOULD NOT BE IN ACCORDANCE WITH THE PROGRAM OF THE PRESIDENT.

Senator TRIBLE. Mr. Boland.

STATEMENT OF KEVIN BOLAND, SENIOR ASSOCIATE DIRECTOR, RESOURCES, COMMUNITY AND ECONOMIC DEVELOPMENT DIVISION, GENERAL ACCOUNTING OFFICE, ACCOMPANIED BY LINDA KOONTZ, SENIOR EVALUATOR; CHARLES COTTON, SENIOR EVALUATOR; AND THOMAS ARMSTRONG, ATTORNEY

Mr. BOLAND. Thank you, Mr. Chairman. First of all, I would like to introduce on my immediate right, Charles Cotton, who is the group director responsible for the work in this area, and now on his right, Linda Koontz, who is directly involved with the specific project reviews you mentioned earlier, and on my left, Tom Armstrong, who is from my General Counsel's office.

Mr. Chairman and members of the committee, we appreciate this opportunity to comment on extending titles I and III of the Defense Production Act beyond the current September 30, 1983, expiration date and on the nine projects considered by the Department of Defense to be high priority for title III funding in fiscal years 1983 and 1984.

My testimony today will address the reasons why we believe that titles I and III should be extended. I will also address why we believe that the Congress should consider amending title III to insure that the national security benefits, as well as the economic costs of each title III proposal are adequately justified. Our conclusions are based on our evaluation of DOD's nine high-priority projects and FEMA's cobalt proposal. Our assessment of each DOD project has been provided to this committee under separate cover, because the information contained therein has been classified by DOD. I will comment further on these issues after briefly summarizing why we believe that the act's titles I and III should be extended.

DOD CONTRACTS RECEIVE PREFERENTIAL TREATMENT

The act's title I priorities and allocations insure that DOD contracts receive preferential treatment, when necessary, to meet delivery schedules. In a March 11, 1983, report, we stated that a lapse of title I could result in difficulty in acquiring desired products, schedule or delivery delays, cost growth, problems in administering and enforcing the act's authorities and regulations and contractual problems.

In situations where the available supply is not sufficient to meet total national security demand, title III loans, loan guarantees, purchases, commitments to purchase, and floor price quarantees also called price supports, are available to provide financial and other assistance to private industry to expand or establish domestic productive capacity and supply. Based on our current evaluation, we believe that the loss of title III would not have an immediate impact on existing DOD programs. It would, however, eliminate future options for expediting production and deliveries of services to aid in carrying out Federal contracts for procuring materials or the performance of services for the national defense, especially during periods of national emergency.

Thus, we believe that the loss of titles I and III could have a widespread impact on the way DOD satisfies its procurement and readiness responsibilities and, therefore, we suggest extending the expiration date. We believe that the 5-year extension being considered by this committee appears reasonable, in that it provides the time necessary for both the administration and the Congress to determine the best uses of title III.

Now turning to the recently renewed Federal interest in using title III. The Congress authorized DOD to reprogram up to $50 million in fiscal year 1983, and DOD has requested a $200 million fiscal year 1984 appropriation for title III purchase commitments of metals, minerals, and materials. According to a February 22, 1983, memorandum from the Under Secretary of Defense for Research and Engineering, DOD plans to request an additional $300 million authorization in fiscal year 1985 and reach a program-sustaining level of $500 million annually, beginning in fiscal year 1986.

DOD plans to use these funds to expand or establish domestic productive capacity and supply of critical national security products. DOD proposes to use title III anywhere weaknesses or bottlenecks are found in the defense industrial base. This planned use differs from the primary past use of title III, in that it reaches beyond raw materials production to include intermediate and processed materials. DOD has also agreed with the Office of Management and Budget to limit the projects to purchase commitments only rather than to employ the full range of Federal subsidies available under title III.

While we foresee instances where the use of title III may be needed to stimulate domestic production, we testified in March 1983 before this committee that our work indicated that title III may not always be the most cost-effective alternative for promoting long-term national security, when compared to other alternatives, including stockpiling and the development of substitutes.

Similarly, our recent assessment of FEMA's cobalt proposal found that, if domestic capacity is to be maintained, Federal price guarantees may have to be continued far beyond the 5-year period envisioned by FEMA and may have to be increased as the grade or quality of cobalt ore decreases. Our assessment of the nine projects considered by DOD to be high priority for title III funding in fiscal years 1983 and 1984 also supports our position.

SELECTING TITLE III PROJECTS

To implement a title III program, DOD and OMB developed criteria for selecting title III projects. We reviewed these criteria and find them reasonable.

The criteria can be divided into two broad objectives— national security benefits and economic costs. First, under the criteria, DOD must clearly show that the free market cannot be reasonably expected to provide a required national security capability in a timely manner.

Second, the criteria require DOD to weigh the economic benefits and costs of using title III to mitigate an identified weakness in the defense industrial base against other alternatives, to show that it is the most expedient and practical procedure for resolving the problem. DOD is also required to show that the needed capacity is not likely to be met under other funding programs.

DOD has provided the criteria, as well as 20 title III projects to the Congress. DOD considers nine of the projects to be high priority for title III funding in fiscal years 1983 and 1984. In reviewing these nine projects, we evaluated the project justifications and available supporting documentation. We also discussed the projects with responsible DOD, Army, Navy, Air Force, and National Aeronautics and Space Administration officials as well as industry representatives.

In general, we found that DOD's projects do not adequately justify the national security benefits to be derived and/or the economic costs associated with the Federal subsidy. For six of the projects, a weakness in the defense industrial base had not been identified. Moreover, the cost effectiveness of title III compared to other alternatives was not adequately justified for any of the nine projects.

Army, Navy, and Air Force officials we contacted believed that they were not provided the time necessary to insure that the projects they proposed met the criteria developed by DOD and OMB. These services and the Defense Logistics Agency were given only 3 days to submit proposed projects. Furthermore the projects submitted by the services were not rigorously reviewed within DOD, and DOD's fiscal year 1984 title III budget request was not subjected to OMB's normal budget hearing process. DOD did not have to provide OMB with projects justifying the amount requested and was given full discretion to select the projects to be funded. OMB officials informed us that this occurred because the decision to fund title III was made late in 1982 to provide an alternative to the Defense Industrial Base Revitalization Act which earmarked $5 billion in Federal subsidies for industrial modernization and strategic and critical materials.

We believe that the short period of time provided the services to submit proposed projects, coupled with the lack of review within the executive branch, contributed to DOD's inability to meet its own justification criteria for the nine projects which they considered to be high priority for title III funding. If the services had been given adequate time to develop the projects, and if the projects proposed had been subjected to a more thorough review process to insure that the justification criteria were adhered to, viable candidates for title III funding might have been identified.

DOD has established a title III steering committee chaired by the Office of the Secretary of Defense and composed of representatives from the Defense Logistics Agency and the services. This committee is to review title III project justifications beginning with those proposed for funding in fiscal year 1985 to determine compliance with the criteria developed. According to OMB officials, the projects will also be subjected to scrutiny through OMB's normal budget hearing process. We believe that these reviews, coupled with adequate lead time for the services to take advantage of available information and to develop and submit proposed projects, should improve the quality of future DOD title III proposals. DOD has also agreed to provide the Congress with an annual list of industry problem areas for which candidate title III projects will be developed, as well as a list of potential projects.

Before leaving this issue, I would like to point out that the question of how best to use title III reaches beyond DOD. Other Federal agencies, such as the Departments of the Interior, the Treasury, and Agriculture, as well as the General Services Administration, have used title III in the past. Still other Federal agencies are proposing to use title III. For example, FEMA has proposed to use title III to stimulate domestic cobalt production.

Other Federal agencies do not have a process similar to DOD's title III steering committee to insure that their title III projects are justified. We deem this process important, since our recent assessment of FEMA's cobalt proposal concluded that FEMA's analysis did not provide the information necessary to (1) identify the most economical investment alternative to meet the stated stockpile goal and (2) understand national security considerations relating to depleting our limited domestic cobalt reserves.

We support the actions being taken by DOD and believe that they will provide a more structured and thorough review of future title III projects. We believe, however, that the Congress may wish to consider amending title III to insure that the national security benefits and economic costs of all title III projects proposed by Federal agencies are adequately justified by including criteria similar to those attached to this statement.

In our March testimony before this committee, we also suggested that title III be amended to give the Congress ample opportunity to review each title III proposal prior to entering into any commitment to provide financial or other assistance. We have, at the request of this committee, attached to this statement a range of options for amending title III to improve congressional oversight. These range from a simple notification requirement to a legislative requirement that no obligation may be entered into, unless each obligation has been specifically authorized or appropriated by law. Each alternative includes a provision to waive such requirements during a national emergency declared by the Congress or by the President.

Let me conclude by recapping the most essential points in my testimony.

First, we support extending the Defense Production Act's titles I and III for 5 years.

Second, while instances may exist where the use of title III is needed to expand or establish domestic productive capacity and supply, our work indicates that title III may not always be the most cost-effective alternative for promoting long-term national security. As such, we support DOD's efforts to establish a steering committee to review title III project justifications. We believe, however, that a similar process should be established to review all title III project proposals, thereby requiring other Federal agencies to justify the national security benefits, as well as the economic costs of each title III proposal.

Third, development of a viable title III program should receive close congressional attention.

Mr. Chairman, that concludes my statement. I welcome any questions the committee may have.

[The complete statement follows:]

UNITED STATES GENERAL ACCOUNTING OFFICE
WASHINGTON, D.C. 20548

FOR RELEASE ON DELIVERY
EXPECTED AT 9:30 A.M.
THURSDAY, SEPTEMBER 15, 1983

STATEMENT OF

F. KEVIN BOLAND, SENIOR ASSOCIATE DIRECTOR RESOURCES, COMMUNITY, AND ECONOMIC DEVELOPMENT DIVISION

BEFORE THE SENATE COMMITTEE ON BANKING, HOUSING, AND URBAN AFFAIRS

ON THE DEFENSE PRODUCTION ACT

Mr. Chairman and Members of the Committee:

We appreciate this opportunity to comment on extending titles I and III of the Defense Production Act beyond the current September 30, 1983, expiration date and on the nine projects considered by the Department of Defense (DOD) to be high priority for title III funding in fiscal years 1983 and 1984. We have, on March 21, 1983, testified before this committee on an August 1982 Federal Emergency Management Agency (FEMA) proposal for using title III to help meet the National Defense Stockpile cobalt goal.

My testimony today will address the reasons why we believe that titles I and III should be extended. I will also address why we believe that the Congress should consider amending title III to ensure that the national security benefits as well as the economic costs of each title III proposal are adequately justified. Our conclusions are based on our evaluation of DOD's nine high priority projects and FEMA's cobalt proposal. Our assessment of each DOD project has been provided to this committee under separate cover because the information contained therein has been classified by DOD. I will comment further on these issues after briefly summarizing why we believe that the act's titles I and III should be extended.

EXTENDING THE DEFENSE PRODUCTION ACT

The Defense Production Act of 1950, originally intended to terminate in 1952, has been extended by a series of amendments ranging from 30 days to 2 years and has never lapsed for longer than a day or two. The act's title I priorities and allocations ensure that DOD contracts receive preferential treatment, when necessary, to meet delivery schedules. In a March 11, 1983, letter to the Chairman of the Subcommittee on Economic Stabilization, House Committee on Banking, Finance and Urban Affairs (PLRD/GP-139), we stated that a lapse of title I could result in (1) difficulty in acquiring desired products, (2) schedule or delivery delays, (3) cost growth, (4) problems in administering and enforcing the act's authorities and regulations, and (5) contractual problems.

In situations where the available supply is not sufficient to meet total national security demand, title III loans, loan guarantees, purchases, commitments to purchase, and floor price guarantees (price supports) are available to provide financial and other assistance to private industry to expand or establish domestic productive capacity and supply. Based on our current evaluation, we believe that the loss of title III would not have an immediate impact on existing DOD programs. It would, however, eliminate future options for expediting production and deliveries or services to aid in carrying out Federal contracts for procuring materials or the performance of services for the national defense, especially during periods of national emergency.

Thus, we believe that the loss of titles I and III could have a widespread impact on the way DOD satisfies its procurement and readiness responsibilities, and, therefore, we suggest extending the expiration date. We believe that the 5-year extension being considered by this committee appears reasonable in that it provides the time necessary for both the administration and the Congress to determine the best uses of title III.

RENEWED FEDERAL INTEREST IN TITLE III

Recently there has been a renewed interest in using title III. The Congress authorized DOD to reprogram up to $50 million in fiscal year 1983, and DOD has requested a $200 million fiscal year 1984 appropriation for title III purchase commitments of metals, minerals, and materials. According to a February 22, 1983, memorandum from the Under Secretary of Defense for Research and Engineering, DOD plans to request an additional $300 million authorization in fiscal year 1985 and reach a program-sustaining level of $500 million annually beginning in fiscal year 1986.

DOD plans to use these funds to expand or establish domestic productive capacity and supply of "critical national security products." These products are defined as "individual combinations of industrial commodities from the basic form to the completed material, item, assembly, or system including the industrial process and machinery required for manufacturing and production process." In other words, DOD proposes to use title III anywhere weaknesses or bottlenecks are found in the defense industrial base. This planned use differs from the primary past use of title III in that it reaches beyond raw materials production to include intermediate and processed materials. DOD has also agreed with the Office of Management and Budget (OMB) to limit the projects to purchase commitments only rather than to employ the full range of Federal subsidies available under title III.

THE NATIONAL SECURITY BENEFITS AS WELL AS THE ECONOMIC COSTS OF EACH TITLE III PROJECT SHOULD BE ADEQUATELY JUSTIFIED

While we foresee instances where the use of title III may be needed to stimulate domestic production, we testified in March 1983 before this committee that our work indicated that title III may not always be the most cost-effective alternative for promoting long-term national security when compared to other alternatives, including stockpiling and the development of substitutes. For example, during the arms buildup that followed the Korean conflict (1954 through 1960), title III was used to improve the capability of our defense industrial base. Title III projects funded during this era, however, often did not achieve this objective beyond the period of Federal subsidy. Similarly, our recent assessment of FEMA's cobalt proposal found that, if domestic capacity is to be maintained, Federal price guarantees may have to be continued far beyond the 5-year period envisioned by FEMA and may have to be increased as the grade or quality of cobalt ore decreases. Our assessment of the nine projects considered by DOD to be high priority for title III funding in fiscal years 1983 and 1984 also supports our position.

DOD's projects do not meet self-imposed criteria

To implement a title III program, DOD and OMB developed criteria for selecting title III projects. (See attachment I.) We reviewed these criteria and find them reasonable.

The criteria can be divided into two broad objectives--national security benefits and economic costs. First, under the criteria, DOD must clearly show that the free market cannot be reasonably expected to provide a required national security capability in a timely manner. (This objective was expressly set forth in the President's July 22, 1982, National Security Decision Directive Number 47.) That is, DOD should provide an in-depth analysis to justify that a weakness exists within the defense industrial base such as the need to increase domestic capacity to reduce lead times or shortfalls, stabilize system acquisition costs, eliminate production bottlenecks, and/or reduce import vulnerability thereby eliminating unacceptable existing or projected supply shortages or disruptions.

Second, the criteria require DOD to weigh the economic benefits and costs of using title III to mitigate an identified weakness in the defense industrial base against other alternatives to show that it is the most expedient and practical procedure for resolving the problem. DOD is also required to show that the needed capacity is not likely to be met under other funding programs.

DOD has provided the criteria as well as 20 title III projects to the Congress. DOD considers nine of the projects to be high priority for title III funding in fiscal years 1983 and 1984. In reviewing these nine projects, we evaluated the project justifications and available supporting documentation. We also discussed the projects with responsible DOD, Army, Navy, Air Force, and National Aeronautics and Space Administration officials as well as industry representatives.

In general, we found that DOD's projects do not adequately justify the national security benefits to be derived and/or the economic costs associated with the Federal subsidy. For six of the projects, a weakness in the defense industrial base had not been identified. Moreover, the cost-effectiveness of title III compared to other alternatives was not adequately justified for any of the nine projects.

DOD HAS MOVED TO ESTABLISH A MORE STRUCTURED PROCESS TO DEVELOP FUTURE TITLE III PROJECTS

Army, Navy, and Air Force officials we contacted believed that they were not provided the time necessary to ensure that the projects they proposed met the criteria developed by DOD and OMB. These Services and the Defense Logistics Agency were given only 3 days to submit proposed projects. Furthermore, the projects submitted by the Services were not rigorously reviewed within DOD, and DOD's fiscal year 1984 title III budget request was not subjected to OMB's normal budget hearing process. DOD did not have to provide OMB with projects justifying the amount requested and was given full discretion to select the projects to be funded. OMB officials informed us that this occurred because the decision to fund title III was made late in 1982 to provide an alternative to the Defense Industrial Base Revitalization Act (H.R. 5540, now H.R. 2782), which earmarked $5 billion in Federal subsidies for industrial modernization and strategic and critical materials.

We believe that the short period of time provided the Services to submit proposed projects, coupled with the lack of review within the executive branch, contributed to DOD's inability to meet its own justification criteria for the nine projects considered to be high priority for title III funding. If the Services had been given adequate time to develop the projects and if the projects proposed had been subjected to a more thorough review process to ensure that the justification criteria were adhered to, viable candidates for title III funding might have been identified.

Since the nine projects were developed, DOD has established a title III steering committee chaired by the Office of the Secretary of Defense and composed of representatives from the Defense Logistics Agency and the Services. This committee is to review title III project justifications beginning with those proposed for funding in fiscal year 1985 to determine compliance with the criteria developed. According to OMB officials, the projects will also be subjected to scrutiny through OMB's normal budget hearing process. We believe that these reviews coupled with adequate lead time for the Services to take advantage of available information and to develop and submit proposed projects, should improve the quality of future DOD title III proposals. DOD has also agreed to provide the Congress with an annual list of industry problem areas for which candidate title III projects will be developed, as well as a list of potential projects.

Before leaving this issue, I would like to point out that the question of how best to use title III reaches beyond DOD. Other Federal agencies such as the Departments of the Interior, the Treasury, and Agriculture as well as the General Services Administration, have used title III in the past. Still other Federal agencies are proposing to use title III. For example, FEMA has proposed to use title III to stimulate domestic cobalt production.

Other Federal agencies do not have a process similar to DOD's title III steering committee to ensure that their title III projects are justified. We deem this process important since our recent assessment of FEMA's cobalt proposal concluded that

FEMA's analysis did not provide the information necessary to (1) identify the most economical investment alternative to meet the stated stockpile goal and (2) understand national security considerations relating to depleting our limited domestic cobalt reserves.

MATTERS FOR CONSIDERATION BY THE CONGRESS

We support the actions being taken by DOD and believe that they will provide a more structured and thorough review of future title III projects. We believe, however, that the Congress may wish to consider amending title III to ensure that the national security benefits and economic costs of all title III projects proposed by Federal agencies are adequately justified by including criteria similar to those attached to this statement. (See attachment II.)

In our March testimony before this committee, we also suggested that title III be amended to give the Congress ample opportunity to review each title III proposal prior to entering into any commitment to provide financial or other assistance. We have, at the request of this committee, attached to this statement a range of options for amending title III to improve congressional oversight. (See attachment III.) These range from a simple notification requirement to a legislative requirement that no obligation may be entered into unless each obligation has been specifically authorized or appropriated by law. Each alternative includes a provision to waive such requirements during a national emergency declared by the Congress or by the President.

- - - - -

Let me conclude by recapping the most essential points in my testimony.

--First, we support extending the Defense Production Act's titles I and III for 5 years.

--Second, while instances may exist where the use of title III is needed to expand or establish domestic productive capacity and supply, our work indicates that title III may not always be the most cost-effective alternative for promoting long-term national security. As such, we support DOD's efforts to establish a steering committee to review title III project justifications. We believe, however, that a similar process should be established to review all title III project proposals, thereby requiring other Federal agencies to justify the national security benefits as well as the economic costs of each title III proposal.

--Third, development of a viable title III program should receive close congressional attention.

Mr. Chairman, that concludes my statement. I welcome any questions the committee may have.

Let me conclude by recapping the most essential points in my testimony.

--First, we support extending the Defense Production Act's titles I and III for 5 years.

--Second, while instances may exist where the use of title III is needed to expand or establish domestic productive capacity and supply, our work indicates that title III may not always be the most cost-effective alternative for promoting long-term national security. As such, we support DOD's efforts to establish a steering committee to review title III project justifications. We believe, however, that a similar process should be established to review all title III project proposals, thereby requiring other Federal agencies to justify the national security benefits as well as the economic costs of each title III proposal.

--Third, development of a viable title III program should receive close congressional attention.

Mr. Chairman, that concludes my statement. I welcome any questions the committee may have.

ATTACHMENT I ATTACHMENT I

CRITERIA FOR SELECTING TITLE III PROJECTS DEVELOPED BY DOD AND OMB

"1. The project must increase the national security capability of the U.S.

"2. The free market cannot be reasonably expected, under existing Administration policy and procurement regulations, to provide the needed capability in a timely manner without Title III incentives.

"3. Evaluation must demonstrate that Title III is the most cost effective procedure under existing budget and procurement guidance/regulations. (Analysis should compare the cost/benefits of Title III, stockpiling or other alternatives under existing procurement regulations; the value of surge, mobilization should be considered along with the cost/benefits of an active industrial base.)

"4. Evaluations should demonstrate that Title III is the most expedient and practical procedure for resolving the problem under existing procurement/budget procedures.

"5. The U.S. national security demand must be equal to or greater than the output of the industrial capacity which will be established through the Title III project.

"6. The Title III project must establish or expand domestic production capacity for peacetime, surge or mobilization for national security products.

"7. The Title III project must be accomplished through purchase commitments only.[1]

"8. The product of the Title III project must be identified in a specification agreed to by the U.S. Government and the contractor before contract award and deliverables under the contract must be to specification."

---

[1] According to DOD's fiscal year 1984 budget justification submitted to the Congress, a "purchase commitment" is a supply contract which is designed to assure the government a secure source of industrial capacity and products critical to national security. Under these contracts, DOD "will agree to purchase a specified quantity of materials over a particular period of time at a negotiated price." However, several of the projects considered by DOD to be high priority for title III funding in fiscal years 1983 and 1984 do not meet this criterion. Since the act provides for other subsidies under title III, we believe that this criterion should be deleted.

PROPOSED AMENDMENTS TO TITLE III OF THE DEFENSE PRODUCTION ACT TO INCLUDE PROJECT PROPOSAL JUSTIFICATION CRITERIA

To assure that the national defense benefits and economic costs of each title III proposal are adequately justified, the loan guarantee, loan, and purchase sections of title III (secs. 301-303) can be amended as follows:

Sec. 301. Loan guarantees. (50 U.S.C. App. § 2091)

Add the following at the end of subsection (a):

> "(3) Guarantees may be entered into under this section only if the President makes the following determinations:
>
> "(A) The guaranteed contract or operation is for a material, or the performance of a service, that is essential to the national defense;
>
> "(B) Without the guarantee, United States industry cannot reasonably be expected to provide the capability for the needed material or service in a timely manner;
>
> "(C) The guarantee is the most cost-effective, expedient, and practical alternative for meeting the need;
>
> "(D) The United States national defense demand is equal to or greater than the output of domestic industrial capability, including the output to be established through the guarantee; and,
>
> "(E) The material or service of the guaranteed contract has been identified in a specification agreed to by the United States and the contractor."

Sec. 302. Loans. (50 U.S.C. App. § 2092)

At the end of the second sentence of section 302, add the following:

"and, (3) no such loan may be entered into unless the President makes the following determinations:

"(A) The loan is for the expansion of capacity, the development of a technological process, or the production of materials essential to the national defense;

"(B) Without the loan, United States industry cannot reasonably be expected to provide the needed capacity, technological processes or materials in a timely manner;

"(C) The loan is the most cost-effective, expedient, and practical alternative method for meeting the need;

"(D) The United States national defense demand is equal to or greater than domestic industrial capability, including the output to be established through the loan; and,

"(E) The material or service has been identified in a specification agreed to by the United States and the borrower."

Sec. 303. Purchases. (50 U.S.C. App. § 2093)

At the end of subsection (a), add the following:

"And Provided further, however, That the President shall take no action under this subsection unless he makes the following determinations:

"(1) The mineral, metal or material is essential to the national defense;

"(2) Without Presidential action under authority of this section, United States industry cannot reasonably be expected to provide the capability for the needed mineral, metal or material in a timely manner;

"(3) Purchases, purchase commitments or other action pursuant to this section are the most cost-effective, expedient, and practical alternative method for meeting the need;

"(4) The United States national defense demand for the mineral, metal or material is equal to or greater than the output of domestic industrial capability, including the output to be established through the purchase, purchase commitment, or other action; and,

"(5) The mineral, metal or material has been identified in a specification agreed to by the United States and the contractor."

B-96983

PROPOSED ALTERNATIVE AMENDMENTS TO TITLE III OF THE DEFENSE PRODUCTION ACT TO PROVIDE FOR INCREASED CONGRESSIONAL OVERSIGHT

We have identified six ways to amend the loan guarantee, loan, and purchase sections (secs. 301-303) of title III to provide the Congress with the opportunity to review each title III proposal and its associated benefits and costs before any obligation is entered into. Two alternatives are simply notification requirements. The other alternatives provide the Congress the opportunity to take action to either approve or disapprove specific obligations.

1. Require the President to notify the appropriate congressional committees of each proposed obligation;

2. Require the President to notify the Congress of proposed action by identifying each proposed obligation in his fiscal year budget submission;

3. Provide that the Congress, by joint resolution, must approve each proposed obligation;

4. Require that the President notify the appropriate congressional committees and provide the Congress the opportunity to disapprove, by joint resolution, those proposed obligations to which it objects;

5. Require the President to obtain legislative authorization for each proposed obligation; or,

6. Require the President to obtain specific appropriation for each proposed obligation.

Suggested language for each alternative follows. Each alternative assumes that the act is amended as suggested in Appendix I.

B-96983

I.

Suggested language to require the President to notify appropriate congressional committees of each proposed obligation

A.

Loan guarantees

Section 301 of the Defense Production Act, 50 U.S.C. App. § 2091, can be amended by deleting subparagraph (e)(1) in its entirety and inserting the following:

> "(e)(1) Except during periods of national emergency declared by the Congress or the President, guarantees may be made under this section only if the Committees on Armed Services of the Senate and the House of Representatives and the Committee on Banking, Housing and Urban Affairs of the Senate and the Committee on Banking, Finance and Urban Affairs of the House of Representatives have been notified in writing, accompanied by a statement from the President explaining the determinations required by subsection (a)(3) of this section, of each such proposed guarantee, and ___ days have expired following the date on which such notice was transmitted to such committees."

B.

Loans

Section 302 of the Defense Production Act, 50 U.S.C. App. § 2092, can be amended by deleting item (2) of the second sentence and inserting the following:

> "(2) no such loans may be made under this section, except during periods of national emergency declared by the Congress or the President, unless the Committees on Armed Services of the Senate and the House of Representatives and the Committee on Banking, Housing and Urban Affairs of the

> Senate and the Committee on Banking, Finance and Urban Affairs of the House of Representatives have been notified in writing, accompanied by a statement from the President explaining the determinations required by subsection (3) of this section, of each such proposed loan and __ days have expired following the date on which such notice was transmitted to such committees."

C.

Purchases

Section 303 of the Defense Production Act, 50 U.S.C. App. § 2093, can be amended by adding the following sentence at the end of subsection (a):

> "And Provided further, however, That, except during periods of national emergency declared by the Congress or the President, the President shall take no action under authority of this section until the Committees on Armed Services of the Senate and the House of Representatives and the Committee on Banking, Housing and Urban Affairs of the Senate and the Committee on Banking, Finance and Urban Affairs of the House of Representatives have been notified in writing, accompanied by a statement from the President explaining the determinations required by this subsection, of each such proposed obligation, and ___ days have expired following the date on which such notice was transmitted to such committees."

II.

Suggested language to require the President to notify the Congress of each proposed action by identifying each proposed obligation in his fiscal year budget submission

B-96983

A.

Loan guarantees

Section 301 of the Defense Production Act, 50 U.S.C. App. § 2091, can be amended by deleting subparagraph (e)(1) in its entirety and inserting the following:

> "(e)(1) Except during periods of national emergency declared by the Congress or the President, guarantees may be made under this section only if each such obligation has been identified in the fiscal year budget, or amendments thereto, submitted to the Congress, accompanied by a statement from the President explaining the determinations required by subsection (a)(3) of this section and if ___ days have expired following the date on which the budget, or amendments to the budget, was transmitted to the Congress."

B.

Loans

Section 302 of the Defense Production Act, 50 U.S.C. App. § 2092, can be amended by deleting item (2) of the second sentence and inserting the following:

> "(2) no such loan may be made under this section, except during periods of national emergency declared by the Congress or the President, unless each such loan has been identified in the fiscal year budget, or amendments thereto, submitted to the Congress, accompanied by a statement from the President explaining the determinations required by subsection (3) of this section and unless ___ days have expired following the date on which the budget, or amendments to the budget, was transmitted to the Congress."

C.

Purchases

Section 303 of the Defense Production Act, 50 U.S.C. App. § 2093, can be amended by adding the following sentence at the end of subsection (a):

> "And Provided further, however, That, except during periods of national emergency declared by the President or the Congress, the President shall take no action under authority of this section unless each such action has been identified in the fiscal year budget, or amendments thereto, submitted to the Congress, accompanied by a statement from the President explaining the determinations required by this subsection and unless ___ days have expired following the date on which the budget, or amendments to the budget, was transmitted to the Congress."

III.

Suggested language to provide that the Congress, by joint resolution, must approve each proposed obligation

A.

Loan guarantees

Setion 301 of the Defense Production Act, 50 U.S.C. App. § 2091, can be amended by deleting subparagraph (e)(1) in its entirety and inserting the following:

> "(e)(1) Except during periods of national emergency declared by the Congress or the President, guarantees may be made under this section only if the Committees on Armed Services of the Senate and the House of Representatives and the Committee on Banking, Housing and Urban Affairs of the Senate and the Committee on Banking, Finance and Urban Affairs of the House of Representatives have been notified in writing, accompanied by a statement from

> the President explaining the determinations required by subsection (a)(3) of this section, of each such proposed guarantee, and ___ days have expired following the date on which such notice was transmitted to such committees, and a joint resolution has been enacted, within such ___ -day period, approving such guarantee."

B.

Loans

Section 302 of the Defense Production Act, 50 U.S.C. App. § 2092, can be amended by deleting item (2) of the second sentence and inserting the following:

> "(2) no such loan may be made under this section, except during periods of national emergency declared by the Congress or the President, unless the Committees on Armed Services of the Senate and the House of Representatives and the Committee on Banking, Housing and Urban Affairs of the Senate and the Committee on Banking, Finance and Urban Affairs of the House of Representatives have been notified in writing, accompanied by a statement from the President explaining the determination required by subsection (3) of this section, of each such proposed loan, and ___ days have expired following the date on which such notice was transmitted to such committees, and a joint resolution has been enacted, within such ___-day period, approving such loan."

C.

Purchases

Section 303 of the Defense Production Act, 50 U.S.C. App. § 2093, can be amended by adding the following sentence at the end of subsection (a):

> "And Provided further, however, That, except during periods of national emergency declared by the Congress or the President, the President shall take no action under authority of this section until the Committees on Armed Services of the Senate and the House of Representatives and the Committee on Banking, Housing and Urban Affairs of the Senate and the Committee on Banking, Finance and Urban Affairs of the House of Representatives have been notified in writing, accompanied by a statement from the President explaining the determinations required by this subsection, of each such proposed obligation, and ___ days have expired following the date on which such notice was transmitted to such committees, and a joint resolution has been enacted within such ___-day period, approving such obligation."

IV.

Suggested language to require that the President notify appropriate congressional committees and to provide the Congress the opportunity to disapprove, by joint resolution, those proposed obligations to which it objects

A.

Loan guarantees

Section 301 of the Defense Production Act, 50 U.S.C. App. § 2091, can be amended by deleting subparagraph (e)(1) in its entirety and inserting the following:

> "(e)(1) Except during periods of national emergency declared by the Congress or the President, guarantees may be made under this section only if the Committees on Armed Services of the Senate and the House of Representatives and the Committee on Banking, Housing and Urban Affairs of the Senate and the Committee on Banking, Finance and Urban Affairs of the House of Representatives have been notified in

> writing, accompanied by a statement from the President explaining the determinations required by subsection (a)(3) of this section, of each such proposed guarantee, and ___ days have expired following the date on which such notice was transmitted to such committees, and a joint resolution has not been enacted, within such ___-day period, disapproving such guarantee."

B.

Loans

Section 302 of the Defense Production Act, 50 U.S.C. App. § 2092, can be amended by deleting item (2) of the second sentence and inserting the following:

> "(2) no such loan may be made under this section, except during periods of national emergency declared by the Congress or the President, unless the Committees on Armed Services of the Senate and the House of Representatives and the Committee on Banking, Housing and Urban Affairs of the Senate and the Committee on Banking, Finance and Urban Afairs of the House of Representatives have been notified in writing, accompanied by a statement from the President explaining the determinations required by subsection (3) of this section, of each such proposed loan and ___ days have expired following the date on which such notice was transmitted to such committees, and a joint resolution has not been enacted, within such ___-day period, disapproving such loan."

C.

Purchases

Section 303 of the Defense Production Act, 50 U.S.C. App. § 2093, can be amended by adding the following sentence at the end of subsection (a):

> within ___ days following the submission of the budget, or amendments to the budget, to the Congress."

B.

Loans

Section 302 of the Defense Production Act, 50 U.S.C. App. § 2092, can be amended by deleting item (2) of the second sentence and inserting the following:

> "(2) no such loan may be made under this section, except during periods of national emergency declared by the Congress or the President, unless each such loan has been identified in the fiscal year budget, or amendments thereto, submitted to the Congress, accompanied by a statement from the President explaining the determinations required by subsection (3) of this section, and unless each such loan has been authorized by act of Congress within ___ days following the submission of the budget, or amendments to the budget, to the Congress."

C.

Purchases

Section 303 of the Defense Production Act, 50 U.S.C. App. § 2093 can be amended by adding the following sentence at the end of subsection (a):

> "And Provided further, however, That, except during periods of national emergency declared by the President or the Congress, the President shall take no action under authority of this section unless each such action has been identified in the fiscal year budget, or amendments thereto, submitted to the Congress, accompanied by a statement from the President explaining the determinations required by this subsection, and unless

> each such action has been authorized by act of Congress within ___ days following submission of the budget, or amendments to the budget, to the Congress."

VI.

Suggested language to require the President to obtain specific appropriation for each proposed obligation

A.

Loans

Section 302 of the Defense Production Act, 50 U.S.C. App. § 2092, can be amended by deleting item (2) of the second sentence and inserting the following:

> "(2) no such loan may be entered into under this section, except during periods of national emergency declared by the Congress or the President, unless each such loan has been identified in the fiscal year budget, or amendments hereto, submitted to the Congress, accompanied by a statement from the President explaining the determinations required by subsection (3) of this section, and unless each such loan has been individually funded by an appropriations act."

B.

Purchases

Section 303 of the Defense Production Act, 50 U.S.C. App. § 2093, can be amended by adding the following sentence at the end of the section:

> "*And Provided further, however*, That, except during periods of national emergency declared by the President or the Congress, the President shall take no action under authority of this section unless each such action has been identified in the fiscal year budget, or amendments thereto, submitted to the Congress, accompanied by a statement from the President explaining the determinations required by this subsection, and unless each such action has been individually funded by an appropriations act."

Senator **Trible**. Thank you very much.

The recent Supreme Court decision in *Chadha,* which struck down the legislative veto provision, is that action relevant to the provisions of title III of the present Defense Production Act, which provides, of course, for congressional disapproval of proposed loans and purchase agreements?

Mr. **Boland**. On that question, Mr. Chairman, I will defer to my counsel, who is, I think, best equipped to answer that, Mr. Armstrong.

Mr. **Armstrong**. Sections 301 and 302, I believe, of title III, have a provision that by a one-house resolution an obligation may be disapproved by Congress. That would probably be unconstitutional now under *Chadha,* since it doesn't meet bicameralism and the present requirements.

Senator **Trible**. Based on that assessment then, these provisions should be removed or restructured?

Mr. **Armstrong**. Well, the committee has the opportunity now to do that in considering an extension of the act.

Senator **Trible**. And you have made recommendations?

Mr. **Armstrong**. The option we provided——

Senator **Trible**. On how Congress can continue to exercise some oversight?

Mr. **Armstrong**. Yes. The options we provide, we feel would stand any constitutional challenge.

Senator **Trible**. It is your view then that all of the suggestions made are constitutionally viable?

Mr. **Armstrong**. Yes, sir.

Senator **Trible**. And it is a political question for the U.S. Senate and the House of Representatives to resolve as to what manner it should be adopted.

Mr. **Boland**. I might add, Mr. Chairman, the difference among the six options we lay out, is primarily in form rather than substance; but they do provide a range from simple notification to legislative action.

Senator **Trible**. Let me ask you this. Based on what you have seen from this review and others, would you recommend Congress retain the rights to scrutinize and perhaps disapprove individual title III projects?

Mr. **Boland**. I think with the renewed emphasis in title III and some of the early problems we have seen, I think the Congress would be wise to exercise some strong oversight; but we leave it to the discretion of Congress to decide what shape or form that should take.

Senator **Trible**. At this point, I would like to focus on a specific title III request that has been made. To that end, I would invite Dr. Wade to return to the table and perhaps the principals could be at the table, and your able associates could form a second tier.

And at this point, the committee will go into executive session to focus on discussing certain classified materials relating to our national defense and the Defense Production Act.

And I must request that all members of the public leave the hearing room at this time, and all staff members, as well, who do not have security clearance.

[Whereupon, at 10:45 a.m., the committee went into executive session.]

EXECUTIVE SESSION

The committee met in executive session at 10:50 a.m., in room SD-538, Dirksen Senate Office Building, Senator Paul S. Trible presiding.

Witnesses: Dr. James P. Wade, Principal Deputy Under Secretary of Defense for Research and Engineering, Department of Defense, accompanied by Jack Eck, Staff Specialist for Materials; and Kenneth R. Foster, Staff Director, Materials Policy; and Kevin Boland, Senior Associate Director, Resources, Community and Economic Development Division, General Accounting Office, accompanied by Linda Koontz, Senior Evaluator; Charles Cotton, Senior Evaluator; and Tom Armstrong, Attorney.

Senator **Trible**. Gentlemen and lady, let's resume the session then. I assume everyone that is here is properly here, and I will ask the principals to vouch for their associates, and we will proceed.

What I would like to do is this, if I may. There are two tiers of requests, in terms of two levels of projects. I would ask that the General Accounting Office proceed with its confidential or secret submission to the Congress.

And let's begin with the first item, and what I would suggest for these proceedings is that the General Accounting Office will put forward its thoughts and concerns about the first item, and then Dr. Wade, I will ask you to respond and put forth on the record why we should proceed.

Dr. **Wade**. Yes, Mr. Chairman.

Before we start with the number of items, I would like to ask your permission to address the two questions that you asked earlier in regard to the GAO comments, and also add a few points raised during the GAO testimony.

Senator **Trible**. Please.

Dr. **Wade**. First of all, in reference to the comments as to the time available for the services to provide the list of candidate projects, the Department responded to a request from the House Armed Services Committee back in April, for which we were given 5 days to respond. We thereby gave the services 3 days for their input, and took 2 days for assembly, so it was in response to a request from the Congress. In that context, we did our best to meet the deadline, and we complied with that schedule to the best of our ability.

Second, in reference to cost effectiveness, one approach that the Department has—and I think it's the only viable approach—is to go forth with RFP's. Through this request for proposals, we can receive needed evaluation and make more realistic evaluations. I think we agreed to that step in order to give you a solid answer as to whether one project or another really is a viable candidate.

We certainly agree with the comments of the GAO as to the need for solid oversight.

The last point is, how are these projects generated? In the main, they are generated by the services. We request the services who are responsible for the programs and ask them to provide candidate title III programs. We do make the initial assessment. We work with the services to prepare the final detailed list.

DIFFERENCE OF VIEWS WITHIN THE SERVICES

I would also suggest, that there are indeed difference of views within the services. You have one segment of a service whose interest primarily is in near-term readiness: and you have others who have to worry about long-term sustainability problems.

When you're facing a certain level of decrease in your programs now before the Congress, I think there is always a tendency to look to near-term readiness needs. And if you ask this set for their views, that's what you'll get. So when you say service reps, we ought to know who we are talking to. In that context, it's the DOD senior staff that has to make sure that the total spectrum is really addressed; and that the total plan and the necessary priority for all the elements of our deterrent posture is adequately addressed.

Finally, in general, the comments from the GAO are helpful: this program is just starting. We are being cautious. I agree with you that right now, the $200 million figure is soft in regard to detailed programs. That's my own personal judgment. We have a way to go; but the need is here; and, we believe that the few selected projects, as they are finalized are going to be a cost-effective way of providing the needed capability. Either you obtain the requirements through this process or another mode. These are viable projects.

Thank you, Mr. Chairman.

Senator **Trible**. Mr. Boland, why don't we begin, just for the sake of discussion here and start with your first assessment. Why don't you read that?

Mr. **Boland**. All right, Mr. Chairman. I do have some summaries that deal with it. I will just start with the first project that was discussed this morning, and that was PAN fibers. That's one of the projects that has been put forth as to reprogram funds in fiscal 1983.

DOD PROPOSAL TO PURCHASE PAM QUESTIONABLE

The Department of Defense's proposal to purchase polyacrylonitrile fiber, using title III funds, is questionable in light of a March 1983 triservice report on composite materials which recommends that no direct action be taken at this time to establish a domestic source of PAN. The proposal is also questionable, because it does not fully meet DOD's criteria for title III projects, in that it appears the free market can be reasonably expected to provide the needed capability in a timely manner without title III incentives.

Furthermore, we found that no analysis of an option recommended in the triservice report had been adequately considered.

Despite the above, Air Force officials have gone forward with a draft request for proposals, an RFP—which seeks to establish domestic capacity for one-third of all DOD PAN requirements as proposed through 1986 of approximately 800,000 pounds. The draft RFP also seeks to establish at least two sources domestically. The intent is that each source will be capable by 1986 of producing approximately 800,000 pounds. Our review indicates title III incentives are not likely to accomplish these two objectives.

It is clear from our review that the present domestic source of PAN, once qualified for DOD use, would meet the target requirement for all of DOD's PAN needs through 1986. The company can produce 2 million pounds of PAN precursor annually.

While we recognize that this domestic PAN is not yet qualified, the domestic producer fully expects the product to comply with DOD specifications, because this firm is providig technology development under joint licensing arrangements with a present Japanese supplier of PAN.

The U.S. producers' technology is thus comparable to that of the Japanese firm.

SECOND POSSIBLE MANUFACTURER OF PAM

It is also clear that a second source may enter the market on its own without title III incentives. According to the triservice report, this second possible manufacturer is currently studying options for developing a domestic PAN facility with a capacity of producing approximately 1.5 million pounds annually by the end of 1984.

The report concludes that if DOD took no action, one and possibly two domestic sources of PAN precursors with capacity exceeding military requirements would be available by 1986.

In addition, the report concludes that DOD should direct the use of domestic PAN-based graphite fibers for at least one-third of the total requirement for all production systems. Although the proposal recognizes that procurement directed to the domestic source could provide the market required, no analysis to determine this option's feasibility has been conducted.

An Air Force official explained this lack of analysis by saying that responses to the draft RFP will supply the needed data.

Officials also informed us that DOD has asked the Air Force to update the triservice report. In doing so, alternatives and trade-offs associated with title III funding are to be analyzed. The Air Force expects to complete this update by the end of September 1983. Responses to the draft RFP are expected by September 20, 1983.

Senator **Trible**. Dr. Wade.

Mr. **Foster**. Since I was the one that developed the request for the services to do the study, I would like to answer that.

What happened was that in my own work, I found the use of carbon/graphite epoxy composites increasing very, very dramatically and far beyond the production capabilities of the domestic producer who had just come on stream. It was not qualified. We asked the services to take a look at this to see what would happen and issued a formal request for study. In their examination, they did give us the response, if you direct us, we will have to do it.

What they were saying was, we can't afford to, under the circumstances. I asked if we did have a title III program, would that be a solution for you that would be acceptable. The answer was, yes, it would. I then asked, if you did not have a domestic source how will you support your accelerated production program? The answer was, we must have domestic resources.

So what I'm saying is, let's take a look at the F-18 aircraft, which has 15-percent graphite epoxy composite by weight in the airframe, and the AV-8B, which is now 24 percent of graphite epoxy composite by weight in the airframe, and the new advanced tactical fighters which will be 35- to 40-percent graphite epoxy composite by weight in the airframe. We could not continue to rely on Japan for polyacrylonitrile and still have a viable defense mobilization plan. It seemed the way to do it was to get the attention of the domestic industry and to incentivize them to come on board, and much of that has already happened. We are still continuing to produce polyacrylonitrile with our draft RFP, which is our attempt to see what the cost would be and, in fact, that's the purpose of the draft RFP.

Senator TRIBLE. Well, that response fails to address the central point of the GAO submission which is, that it's clear the present domestic source of PAN, once qualified for DOD use would meet the target requirement for all of DOD's PAN needs through 1986.

Mr. FOSTER. There are two points: There is no assurance it will qualify, and second, the increase we have right now is about a 1,600-percent increase, which is eight times more than the current producer can make. As a matter of fact, I might add, sir, that very fact is in the same triservice report the GAO is referring to. The chart is there that shows the increase and also there is a line across that I put at the 2-million-pound point, which is the current domestic capability, it falls far short by eight hundred percent less than our outyear requirements for polyacrylonitrile.

Senator TRIBLE. GAO submits that DOD for the Tri-Service Report—this is report of all three services? Is that what "Tri-Service" means?

Mr. FOSTER. Yes, sir.

Senator TRIBLE. So we're not in a position where we have the Army and the Navy and the Air Force at odds or in competition, but in agreement, and their report concludes that if DOD took no action, one, and possibly two domestic sources of PAN precursors would take a capacity exceeding the military requirement to be available by 1986?

Mr. BOLAND. Linda Koontz, from my staff, who has been very close to reviewing this project and others we will be discussing, might have some comments that will be helpful.

Ms. KOONTZ. The information that we have received during the Tri-Service Report only talks about a goal of one-third of the domestic requirement of the 2 million pounds. Other requirements data was not included. And since the domestic source is aimed toward a full 2 million at this point, and with another source likely to enter the market in 1984, it seems that it is somewhat premature to make that assessment.

Mr. BOLAND. If I might add to that, in the process of using an RFP to develop more information, I don't think it's an appropriate substitute for determining a need as measured against predetermined criteria, which OMB and DOD have themselves come up with, and that follows through all the things we'll be discussing here. There is evidence that has not been followed through, we think, adequately to meet the criteria that OMB and DOD have established themselves.

Then there is a question of how much is enough. But to reach that final judgment, we don't think that process has been carried forward to a bare minimum.

Senator TRIBLE. Explain to me the request for proposals process. It doesn't matter who does that. I'm sure you agree on the process.

EXPLANATION OF REQUEST FOR PROPOSALS PROCESS

Mr. ECK. Senator, first there are draft RFP's which means the services have put them out—and I'm speaking of RFP's put out in 1983—the services have put out drafts of what they consider to be RFP's. They will finalize each into an RFP which says, "Industry, this is what the U.S. Government is requesting in the way of a program, please respond against this and tell us what you can do."

Those responses are then evaluated, one against the other, and in accord with the criteria that is written up front. When you put up the criteria, you see which of these respondents is giving the best deal, at least from our opinion, to the U.S. Government. You give them a chance—to revise their RFP's and make the best and final offer, you evaluate them, and again select who you award that contract to.

In each draft RFP, there is a statement that says that this is a preliminary document and there is no assurance we will award the contract. It is subject to availability of funds.

The reason we have chosen to go this way—and I'll use cobalt as an example—it creates a lot of problems when you use cobalt, but there is a lot of information going around that is just not accurate. The cobalt industry has come in and said $28, $25 a pound publicly, and tells us privately $10, $12 a pound. The RFP procedure is the only procedure by which we can get them to state on a piece of paper, where they have to verify what they are saying is true, what they will sell it for, for what period of time, and we can then perform the necessary cost-benefit analysis to determine what benefits there are to the national security for this expenditure.

Mr. COTTON. Senator, could I reflect on that for a moment?

A draft RFP can be issued by the services, by DOD before funds are appropriated by the Congress. In other words, a draft RFP is a vehicle for them to obtain the information that we're calling for and that they are calling for in their own criteria to be met before they come forward to you with project proposals.

So it is not contingent upon you providing them funds before they go forward with draft RFP's. It should be the other way around.

IDEAS NOT SUFFICIENTLY EVALUATED

Senator TRIBLE. You see, what troubles me here is—and I don't mean to begin an exercise in micromanagement—I am for giving the administration—any administration—but particularly this administration, from my vantage, a good deal of discretion which, I must say quite honestly, Dr. Wade, it appears to me that these ideas have not been sufficiently evaluated, and one or all of these initiatives may well be in the national interest, but at least on the information before me, I am unpersuaded that you and the administration are in a position to make that case.

I noted with special interest the language of the GAO report commending you for establishing procedures that in the future will permit this process to unfold responsibly.

Quoting from that report:

> Since the nine projects were developed, DOD has established a Title III Steering Committee, chaired by the Office of the Secretary of Defense and composed of representatives from the Defense Logistics Agency and the Services. This commitee is to review Title III project justifications, beginning with those proposed for funding in FY 1985 to determine compliance with the criteria developed. According to OMB officials, the projects will also be subject to scrutiny through OMB's normal budget hearing process.

That's the way the process ought to unfold. The requests that are before us now are not well defined. They have not been persuasively advanced. But for the inquiry of this committee, unanticipated though it might have been, they would have gone through. That troubles me. I speak as someone who would far rather be on the Armed Services Committee than the Banking Committee.

I want America to have military power and naval capacity second to none. But if we are going to be able to accomplish that objective, we have to spend our dollars wisely, and it seems like Congress is being asked—or the Congress isn't really being asked—that's what troubles me—but it seems to me DOD intends to spend dollars here or is requesting dollars without fully evaluating how those dollars ought to be used.

Dr. WADE. First of all, Mr. Chairman, I note, as we discussed earlier, that this new process procedure is now under way. We are establishing, firming up our criteria; but, the bottom line, before we commit any money, will be by going through the review process, by firmly establishing the requirements, by seeing the need for the future, we are going to be protected by our review process in the context of spending these resources wisely.

A set of projects firmed up will come before Congress for its oversight responsibility. You also will be protected in this regard.

Our judgment is that this is a sound approach. We are just at the first step and I can assure you we are going to proceed carefully.

Senator TRIBLE. Why not await the unfolding of this process and then ask Congress for precise sums of money to implement the programs that ought to be realized? It seems to me you're putting the cart before the horse here. It is my impression that Congress ought not to authorize and appropriate any money in the next fiscal year for this purpose, but that rather you ought to permit this new organized procedure to unfold. You ought to proceed with the inquiry to find out what our requirements are and how they can best be realized, and then come forward in fiscal year 1985, after everything is fully scrutinized by the administration and make a request of Congress.

Now what I would like to do is this, gentlemen and lady. I don't want us to get—I don't think we need to go through a process where we go from one side to the other, but I do believe, Dr. Wade, that you ought to have the opportunity to respond to the concerns raised by the General Accounting Office, and what I'd like you to do or invite you to do for the record is to tell us why these initiatives should be undertaken at this time, responding to the points raised by the General Accounting Office. I think that's important for the record.

Dr. **Wade**. Yes, sir.

Senator **Trible**. And I would invite you to do that for the record, so it can be fleshed out and can reflect the viewpoint from all sides.

WHY TITLE III INITIATIVES SHOULD BE UNDERTAKEN AT THIS TIME

Question. And I would invite you to do that for the record, so it can be fleshed out and can reflect the viewpoint from all sides.

Answer: The industrial resource shortfalls have been clearly identified and will continue unless corrective action is taken. The Title III initiatives are the most cost-effective and expedient methods for resolving the industrial deficiencies.

The subcommittee counsel wants to whisper in my ear, so just bear with me for a minute, and I'll see what he has to say.

My associate makes a worthy point, and that time is of the essence, and we want to reauthorize this important program before it expires. And a part of that process would be the authorization of the $200 million, so I would invite you to respond and respond quickly.

Mr. **Eck**. Senator, I did want to add one thing. We have had some real problems with the credibility of this program because of the lack of appropriations. We cannot get industry to give us hard factual data, simply because they know there is not an appropriation to enter into these contracts. We have put out some RFP's, and I can understand Congress position on oversight. We have the same problem how to determine real programs.

We feel very strongly that we must go through this RFP process and we must have credibility with the industry, so that we can enter into contracts, if, in fact, these programs are demonstrated to be cost effective. If, in our screening criteria, they are not cost effective, we will not be entering into them. That is our intent also.

Senator **Trible**. It seems to me there must be a way that you can undertake this preliminary inquiry to assess national requirements and how, if there is a requirement, that it can be met through the provisions of this act without requiring the authorization and appropriation of hundreds of millions of dollars.

Dr. **Wade**. The request, Mr Chairman, of responding quickly to the GAO report, which we haven't seen, is fine.

[GAO report follows:]

General DoD Comments on the Classified GAO Statement

General Comments

One of the key elements of each GAO writeup was a determination that DoD had not complied with nor completed the OSD/OMB screening criteria. We believe that this criticism is unwarranted. Our interpretation of this requirement is that we have to comply before contract award not before we ask for funding. We consider it highly unlikely that we can obtain definitive data necessary to complete the detailed cost/benefit analysis required without funding. Contractors are not going to dedicate the required personnel and funds to prepare detailed data without a reasonable assurance of contract award. Therefore, appropriations must be available to finalize contracts, if agreement is reached, if industry is to be convinced that the Title III program is a creditable effort.

Industry Comments

We can not refute that certain members of industry have indicated to GAO representatives that they may have capacity in certain cases or are planning on expanding capacity to meet future needs. However, we must remember that these are only statements and that the industries have not demonstrated this through any present expansion or investment. The only way we can assure there will be capacity is to guarantee a market for those future investments.

As an example, in 1979/80 when we were faced with increasing lead times in the forging industry, the industry association was saying there was adequate capacity, yet lead times for heavy forging were going up. Why? Because in the aggregate, industry was correct; however, when specific end items were considered, the case was not true.

GAO infers that other alternatives were not investigated. Multiyear contracting techniques have always been considered but discounted because it would require multiyear authority for a large number of programs to provide sufficient market for the producer. It was considered highly unlikely that we would be able to obtain multiyear approval for such a large number of programs. Further, it would still require appropriations up front. Finally, it would also be impractical to assure that the product went only to the projects with multiyear authorization. Direct government investment in plants and facilities was also considered. However, it is both congressional (Defense Industrial Reserve Act of 1973) and Defense Policy to place maximum reliance on the private sector for the capital assets (plant and equipment) necessary to manufacture Defense end items. Therefore, Title III became the preferred method. Additionally, direct government loans or loan guarantees were considered but this alternative can require government expenditure prior to delivery of any product. Under Title III purchase commitments, no expenditure is incurred until delivery of acceptable product; therefore, purchase commitments were chosen.

Free Market

We agree with the GAO assumption that the free market will normally take care of DoD's needs. Indeed, a prime criterion is that we will only undertake Title III projects when the free market forces will be unable to assure resources when required. In these cases, the capacity has to be in place when the system is ordered if undue lead times and costs are to be eliminated. Primes and subcontractors must have these materials available when their orders are placed; they cannot wait until the capacity is established. Using routine weapon system procurement as an alternative to stimulate the development of new capacity of these core industries under Title III does not consider the two or more years required to establish new capacity. The lessons learned in the late 1970's when we experienced enormous growth in lead times was a vivid example of what can/will happen when we have insufficient capacity.

COBALT

1. General GAO Comments on the Project:

   "Cobalt, submitted by the Air Force as a potential Title III candidate, is expected to require fiscal year 1983 and 1984 funding at a maximum cost of $25 million. Because this project was submitted to the Congress in name only and not as a written proposal, almost no documentation exists to support the need for this program. As a result, we could not review the proposal and supporting analysis as requested."

2. DoD Rebuttal:

   The Air Force has drafted a Request for Proposal (RFP) utilizing a portion of the FY 83 authority ($2 million). The project is in two phases. Phase I establishes demonstration capability and provides pilot plant production for evaluations of the quality of domestically produced cobalt for defense applications. Although we would prefer to pay no more than the market price for cobalt the Air Force feels it may be necessary to pay higher prices during Phase I if we are to stimulate domestic production. If this assumption proves true the Air Force will request the Title III Steering Committee consider the project for FY 84 funds. Phase II would be budgeted for in FY 86.

   DoD has not made a decision to pay higher than the market price but we did issue a Request for Proposal (Air Force) for two reasons: (1) to obtain definitive data through legal contracting procedure for a cost/benefit analysis of domestic cobalt production; and (2) to determine if domestically produced cobalt will meet national security requirements. The proposed cobalt projects have been controversial with contradictory data being quoted and evaluated. The proposal stated a specific objective so the validity of future cobalt projects could be evaluated and a final determination made on future government cobalt purchase commitments under Title III. This fact was not included in the GAO remarks.

3. Annual Requirements[1]: Total economy - 15 million pounds
   National security - 7 million pounds
   (superalloy grade)

4. Annual Domestic Production[1]: None

5. Problem: 100% import dependence - primarily southern Africa

6. Reason for Project: To determine if domestic production is possible and if it can meet superalloy requirements

---

[1] Source of Information: U.S. Bureau of Mines

METALLIZED GLASS CHAFF

1. General GAO Comments on the Project:

   The gist of GAO's comment is that DoD "has not yet fully investigated the direct melt, continuous flow method of producing chaff . . . and has not weighed the economic benefits and costs of using Title III against other alternatives."

2. DoD Rebuttal:

   DoD has already identified the same problems as GAO. Navy is preparing an RFP to investigate the technological feasibility of the continuous-melt process. We expect to use the information gained to judge the continuous-flow method of producing chaff and its economics. At that point we will know whether a purchase guarantee is cost effective.

3. Annual Requirements (FY 84)[1]: 1,140,000 pounds

4. Annual Domestic Production[1]: 1,140,000 pounds

5. Problem: Existing production base is incapable of producing the mobilization requirements. Peacetime procurement is but a very small fraction of mobilization requirements of approximately 2 million pounds/-month.

6. Reason for Project: Establishment of production base capable of meeting surge and mobilization requirements.

7. Specific DoD Comments on the Classified Statement:

   A. Page 1, paragraph 1 - "The Department of Defense's proposal to use Title III authority under the Defense Production Act for procuring metallized glass chaff manufactured through the direct melt, continuous flow method has not been adequately justified. While DoD showed that the free market cannot currently supply enough chaff to meet the mobilization requirement, it has not yet fully investigated the direct melt, continuous flow method of producing chaff as a means to meeting the mobilization requirement. In addition, DoD has not weighed the economic benefits and costs of using Title III against other alternatives."

   DoD Rebuttal - DoD has already identified the same problems as GAO. As a result, the Navy is preparing an RFP utilizing appropriations other than Title III to verify the technological feasibility of the continuous melt process. The information gained will verify the economics of producing chaff from the continuous flow method. However, we are confident that this process will be proven economic and a Title III contract will be warranted. Therefore, the appropriations have been requested but the Title III contract will not be finalized before the process is verified.

---

[1] Source of Information: Naval Material Command

B. Page 1, paragraph 1, line 12 - ". . . for the development of a test product."

DoD Rebuttal - Should read "for the development of a test process."

C. Pages 1 and 2, paragraph 3, line 6 - "A feasibility study on the process conducted by industry and funded by the Air Force concluded that there were potential problems which needed to be investigated further."

DoD Rebuttal - The Air Force study did recognize the problems, but concluded there was basic merit in the process.

D. Page 2, paragraph 2 - GAO reviewed the comparative cost effectiveness of continuous melt technology versus the current process by citing a 1981 study and contrasting it with (their) more recently acquired information.

DoD Rebuttal - The contrast is largely irrelevant since the actual decision has not been made and the data will be forthcoming from the test process under the Navy's RFP. Further, weighing the "cost of products procured under purchase commitments" as a negative against Title III is incorrect when DoD must buy more chaff in any case because current inventories are well below requirements.

E. Page 3, paragraph 1, line 2 - "It appears that further analysis of alternatives, such as government-owned equipment, is warranted before using purchase commitments under Title III."

DoD Rebuttal - Additional alternatives are being evaluated as part of the verification program. Most alternatives require direct government investment in facilities and equipment and add additional cost which may not result in savings in material acquisition cost, whereas the Title III purchase commitment only requires DoD to purchase material which must be purchased anyway.

METALLIC BERYLLIUM

1. General GAO Comments on the Project:

GAO contends that the Air Force feels the Beryllium proposal is premature.

2. DoD Rebuttal:

The Air Force supports the Beryllium project and does not feel the program is premature. The Beryllium study, which GAO attributed to the Air Force, is actually a DoD (Army, Navy and Air Force) study to update the Beryllium requirements study completed in 1979. We believe it is prudent to request funding to proceed under Title III for the following reasons: a) Our 1979 Beryllium requirements study verifies the need for continued availability of Beryllium; b) There is only one free-world source for Beryllium metal; c) The single source periodically violates established OSHA standards for exposure to a carcinogenic substance; and d) The stockpile metal is of questionable quality and would have to be reprocessed before use by defense contractors (only reprocessing capability is the sole source manufacturer).

3. Annual Requirements (including Department of Energy)[1]: approximately 55,000 pounds (finished product)

4. Annual Production[1]: approximately 80,000 pounds (estimated gross production)

5. Problem: Sole source producer is located in extremely old, deteriorating plant which does not meet OSHA established standard for Beryllium exposure. If proposed new standards are mandated, the source will be shut down. After the second source left the market in the late 1970's, the price of the metal rose 65 percent while demand remained stable.

6. Reason for Project: Establish source of Beryllium which uses newest technology to meet OSHA exposure standard and reduce costs of metal.

7. Specific DoD Comments on the Classified GAO Statement:

A. Page 1, paragraph 1, line 3 - "Our review indicates that this proposal was forwarded by the Office of the Secretary of Defense (OSD) to the Congress despite Air Force guidance that using metallic beryllium as a Title III candidate would be premature at this time."

DoD Rebuttal - The Air Force Systems Command did submit a specific Beryllium Title III proposal to OSD (Attachment A). Therefore, the GAO inference that the Air Force tried to prevent rather than sponsor metallic beryllium as a Title III project is incorrect and misleading.

---

[1] Source of Information: DoD tri-Service Beryllium Working Group

B. Page 1, paragraph 1, line 7 - "The Air Force based this guidance on the fact that this product (beryllium) '. . . is the subject of Air Force and Department of Energy (DoE) studies currently underway.'"

> DoD Rebuttal - Because GAO does not give the source for this conclusion nor references any DoD or Air Force correspondence, we can only assume that this was obtained through one of their field interviews with an employee who was not totally familiar with the beryllium situation. The statement dealing with the Air Force study is partly true. However, the beryllium study is not an individual Air Force effort; it is being undertaken by all three Services to identify the total DoD requirement for beryllium. The specific purpose of the study was to identify how much beryllium and in what forms will be required by DoD for the next five years. Preliminary findings have been reported by the Services with final results due by October (Attachment B). One of the major objectives of this effort was to identify the maximum quantity of beryllium required annually. The result of the study provides additional verification that a purchase commitment under Title III of the Defense Production Act will be for the correct quantity. Our annual consumption is already known; however, prior to a long-term contract we must assure future need. The result of the study will be available and reconfirm previous estimates (Attachment C) before the Request for Proposal for a beryllium program is finalized.

C. Page 1, paragraph 2, line 1 - "DoE has awarded a $3.4 million research and development study to the present domestic manufacturer of metallic beryllium. This manufacturer's representative stated this study will take approximately 2 more years to complete. Because this study is addressing several issues, including the control of beryl emissions and the feasibility of plant modernization, ..."

> DoD Rebuttal - The existing single source supplier may have influenced GAO's opposition to a Title III beryllium program because of the biased nature of its remarks. A $3.4 million contract was awarded by DoE to investigate beryl emission and plant modernization because the sole source supplier does periodically violate OSHA safety limits and the plant is in deteriorated condition. DoE felt they could no longer delay action to improve the situation. The price has escalated in excess of inflation since we lost the only other competitor in 1978. The existing sole source charges a 25 percent profit which we must "take it or leave it" as stated by the contractor. Further, the existing contractor has told us that the government must pay (it estimated the cost to be $50 million) (Attachment D) if we hope to retain a domestic source. Our proposed alternative under Title III was to competitively award a purchase commitment contract to a facility which must be in compliance with existing OSHA requirements. We have had inquiries from a second source (Attachment E) that would compete for a Title III purchase commitment contract. As a minimum, we would obtain one source in compliance with existing OSHA requirements to supply the free world requirements for beryllium without direct government investment.

D. Page 1, paragraph 2, line 9 - "These representatives (sole source domestic supplier) also said that stockpiling of metallic beryllium in its various forms is a viable alternative."

> DoD Rebuttal - The sole source manufacturer certainly would like to see additional purchase for stockpiling because it would represent additional profit (at 25 percent). A Title III project may create competition and reduce this profit. Additionally, we do have material stockpiled today, but it has become obsolete because of changes in technology and must be upgraded (by the existing sole source supplier) before use.

E. Page 2, paragraph 1, line 1 - "In conjunction with this DoE effort, an Air Force task force has been reviewing metallic beryllium requirements, . . . no preliminary findings have been released. . . . final report is due to the Air Force on October 30, 1983."

> DoD Rebuttal - Estimates of Air Force requirements have been obtained (Attachment F). Essentially, the current beryllium requirements study is to update and validate a 1979 DoD beryllium study (see Attachment C). The final report will be available prior to any Title III RFP or contract.

F. Page 2, paragraph 2, line 1 - "Air Force officials we interviewed emphasized that the proposal for this product was prepared quickly and that no detailed analysis was done to support the proposal."

> DoD Rebuttal - While it is true that the proposal was assembled with short notice, the development and refinement of the specific data had been a project underway for several years.

QUIET-RUNNING BEARINGS

1. General GAO Comments on the Project:

GAO questions the quiet-running bearing project on three counts: (1) "There is adequate domestic production capacity to provide 'specifications grade' bearings for the Navy . . ..", (2) Even if not, stockpiling may be more cost effective, (3) In any case, Title III authority was not needed because SPCC was already working on the problem when Title III funding became available.

2. DoD Rebuttal:

The availability of physical production capacity in the U.S. is not the issue. The problem is that there are no current producers of most of the Navy's silent-running bearings, and no way of knowing, short of actual production, whether current domestic producers can indeed manufacture to Navy standards. The only planned mobilization producer for the item requires 18 to 24 months before it can guarantee its own ability to produce MILSPEC bearings, by its own admission.

3. Annual Requirements[1]: 15,000 - 20,000 bearings

4. Annual Production: None

5. Problem: U.S. Navy is 100% import dependent on supply of Quiet-Running Bearings from Japan. This dependence creates a vulnerability of supply cutoff in peacetime or mobilization. U.S. industry would need 1-½ - 3 years to supplement Navy inventory. This is an unacceptable timeframe from a national security standpoint since the fleet could become inoperable due to insufficient quantities of bearings.

6. Reason for Project: Establish domestic capability to reduce import dependency

7. Specific DoD Comments on the Classified GAO Statement:

A. Page 1, paragraph 1, line 8 - "There is adequate domestic production capacity to provide specifications-grade bearings for the Navy under mobilization, though at higher costs than those bearings now imported."

DoD Rebuttal - The availability of physical production capacity in the U.S. is not the issue. The problem is that there are not current producers of most of Navy's silent-running bearings. The only planned mobilization producer for the item requires 18 to 24 months before it can guarantee its own ability to produce MILSPEC bearings, by its own admission.

B. Page 1, paragraph 1, line 12 - "The proposed use of Title III funds appears unnecessary given a bearing procurement strategy developed over a year ago (in February 1982) by Navy field staff which relies solely on the Navy's own Stock Funds."

---

[1] Source of Information: Naval Material Command

> DoD Rebuttal - Stockpiling was explicitly considered as an alternative and forms part of the Title III package during the transition period. However, stockpiling is costly. Maintaining a three-year supply requires an unrecoverable $3 million investment plus perhaps 10-15 percent annual carrying costs. Title III may cost $3 million but returns $2 million in bearings which will be used. Stockpiling does not allow for unexpected changes in demand during a cutoff, or unanticipated design changes resulting from changes in the threat environment. Domestic sourcing allows greater flexibility in supply.

C. Page 2, paragraph 4, line 1 - "While this situation has led to concern about domestic production capability in the event of a supply cutoff from the Japanese, the Navy's analysis to date has not shown that domestic manufacturers could not meet all of the Navy's needs if asked to do so. DoD's claim in the May 5, 1983, bearing project justification that 'there is no U.S. manufacturing capability' is misleading."

> DoD Rebuttal - DoD's claim that "there is no U.S. manufacturing capability" is not misleading. Whereas the physical capacity to produce bearings may be present, they are not producing quiet bearings and we have no way of knowing whether the physical capacity represents actual technology/quality-control know-how necessary to produce bearings to Navy standards.

D. Page 2, paragraph 4, line 7 - "Certain domestic manufacturers currently produce bearings for military gyroscope applications considerably more complex than the Navy's specifications for quiet-running bearings."

> DoD Rebuttal - Whether or not military gyroscope bearings are more complex than silent-running bearings is irrelevant. The issue is noise not complexity.

E. Page 2, paragraph 4, line 10 - "Under a mobilization scenario, our review indicates that more than adequate domestic capacity would be available to provide enough specifications-grade bearings for the Navy, though at higher costs."

> DoD Rebuttal - The claim that one can buy the tools and begin producing bearings within one to 18 months is not the same as the fact that such bearings can be produced and qualified to Navy standards that soon. Such claims are untested.

F. Page 2, paragraph 5, line 1 - Our review indicates that the proposed use of Title III funds may be unnecessary given a bearing procurement strategy developed over a year ago by Navy field staff. We found that until mid-July 1983, when the Chief of Naval Operations offered Navy field staff $1 million in Title III funds to supplement available Stock Funds, Navy field staff had "never heard of Title III" and were already well embarked on a bearing procurement effort designed to stockpile Japanese bearings and stimulate domestic bearing production."

> DoD Rebuttal - The project's independent origin in SPCC speaks well, not ill, of its choice as a Title III nomination - prior consideration suggests the seriousness of the problem. Nevertheless, the fact that SPCC staff had originated this project is no guarantee that it would have been accomplished through existing funding (having so failed in prior years). Using the Stock Fund to incentivize domestic production is considered a less-than-desirable use of the Fund which is supposed to be expended only to replace inventories depleted by issuance. Because of the severity of the problem, this was undertaken. As a Title III project, the accomplishment is more likely.

G. Page 3, paragraph 6, line 3 - "Under a formal RFP issued on August 31, 1983, $2 million dollars of the Stock Funds will be used to enter into a new contract with the Japanese producer (above normal bearing buys) to tide over Navy bearing needs until domestic capacity can be established under contracts using the other $2 million."

> DoD Rebuttal - The new contract with the Japanese producer is not excess to "normal bearing buys"; it is an advance procurement to cover two years of normal buys.

H. Page 3, paragraph 6, line 10 - "Navy officials admit that they are unsure how much new domestic production can be stimulated by this expenditure."

> DoD Rebuttal - It is more accurate to say that Navy officials are unsure about how many classes of bearings will be bid for, not "how much new domestic production can be stimulated by this expenditure." Navy will not stimulate more production than it has consumption requirements.

I. Page 3, paragraph 7, line 3 - "Our review does indicate, however, that the Navy did not perform written analysis supporting the chosen level of Title III funding which was not even requested by the SPCC, or demonstrated that the addition of Title III funds would substantially change the domestic capacity and product quality that could be achieved under SPCC's original proposal."

> DoD Rebuttal - Written analysis supporting the chosen level of Title III funding is impossible until the bid responses are available from the RFP. The fact that SPCC did not request funds per se is irrelevant. They did make their needs known and the project was nominated as a result (Attachment G).

J. Page 3, paragraph 7, line 8 - "A Navy official we contacted was unsure as to how long Title III subsidies would need to be provided to establish economically comparable domestic production."

> DoD Rebuttal - Misleading. Title III money would be used only once. Thereafter, the domestic production would be protected by use of exception DAR 316, a commonly used method for keeping Defense business in the United States.

TRAVELING WAVE TUBES

1. General GAO Comments on the Project:

   GAO's critique of the traveling wave tube proposal asserts that Navy has little interest in a Title III project to address the problem.

2. DoD Rebuttal:

   The problems in the TWT industry derive from the transition in the electronics industry from vacuum tubes to solid state. Investment in the TWT industry has suffered because of the presumption that TWTs also would give way to solid state. Results: stagnant capacity, old equipment leading to high reject rates, low quality control, lack of responsiveness. Researchers at Naval Research Laboratory see no such transition to solid state for ten-to-twenty years. Indeed, demand is expected to triple by the end of this decade. Purchase guarantees, part of a multi-faceted approach, would be used to convince producers that the market for TWTs will continue not only to thrive but grow.

   The TWT industry produces a number of different products for widely varying application using different manufacturing methods. We have tried to have one firm produce another's design and have not succeeded. Thus, available capacity for an individual product is limited to a single firm. The entire industry cannot be evaluated as a whole concerning capacity.

   Current production can be characterized by long lead time, sporadic, annual orders and large back orders. The Air Force considers the industry to be saturated.

   Future Air Force requirements for TWTs have been established by several studies. All identify a major shortfall in production capacity which will significantly increase the already long lead time for first line weapons and space systems by the mid-1980's.

3. Annual Requirements[1]: 10,000 each

4. Annual Domestic Production[1]: 10,000 each

5. Problem: TWTs have become the limiting component for reliability and performance in the majority of tactical radar and electronic warfare systems throughout DoD. Industry is unable to meet DoD future production requirements with existing facilities. Projected requirements for TWTs are expected to triple within the next four years to 30,000 annually.

6. Reason for Project: tri-Service shortfall must be remedied in order to meet FYDP production schedules

[1] Source of Information: Naval Material Command

7. Specific DoD Comments on the Classified GAO Statement:

A. Page 1, paragraph 1, line 8 - "In support of this position, Navy recently recognized that the traveling wave tube problem had not been sufficiently analyzed and as a result, has no immediate plans to fund this project."

> DoD Rebuttal - Navy's recognition that more analysis needs to be done was not an indicator that TWTs were not a problem, but that the precise mix of solutions had not been determined. Neither the Industrial Modernization Incentive Program (IMIP) nor Title III were available for review until late in the study.

B. Page 1, pagaraph 3, line 1 - "The shortage of these tubes in the future is questionable. A Navy official spoke with the eight current TWT manufacturers about their productive capacity and found that the availability of TWTs is represented by DoD's actual fiscal year 1983 demand. Navy compares this amount to the projected demand to determine future shortages."

> DoD Rebuttal - This reference means only that 1983 demand itself was satisfied. The projected demand for TWTs will triple within the next four years with no assurance of increased production.

C. Page 1, paragraph 3, line 6 - "In using this amount, Navy assumes a constant supply. However, a major representative of the TWT industry indicated that his company plans to double its current capacity within the next four years."

> DoD Rebuttal - The Navy assumes a constant supply in its calculations to illustrate what would occur if nothing is done by industry and government. Such a statement is merely a starting point for analysis. Granted, some producers may be willing to expand capacity. However, the GAO citation only refers to one producer (What about the others?). A doubling within four years is insufficient to meet demand expected to triple within four years. Promises of expansion are frequently cited by producers as a tactic to forestall potential competitors, and must be judged accordingly. Projected demand for TWTs does not start to decrease after 1990. The reference to 1990 only indicates that it lies beyond DoD's five-year defense plan. The Navy source cited throughout GAO's critique foresees continued growth. No one challenges the need for current contractors to double capital expenditures to meet DoD needs. Many contractors, however, have told Navy that they would not move without firmer guarantees of a continued and growing market.

D. Page 2, paragraph 5, line 1 - "In its proposal to use Title III authority DoD has not considered the economic benefits and costs of an alternative approach for increasing production in the TWT industry."

DoD Rebuttal - DoD has considered the economic benefits and costs of alternative approaches for increasing production in the TWT industry. GAO oversimplifies the problem by falsely posing it as an either-or choice. Current planning calls for a mix of approaches: Title III purchase guarantees to stabilize the procurement cycle and indicate DoD's continued and growing interest in TWTs; Manufacturing Technology money ($4.5 million) to help solve quality control problems, augmented by other sources of RDT&E funding; IMIP incentives to help spur needed improvements in production technology.

E. Page 2, paragraph 5, line 4 - "While DoD was proposing to procure TWTs costing up to $110 million, Navy was developing another approach to increase productivity in the TWT industry through an acquisition strategy called the Industrial Modernization Incentive Program (IMIP)."

DoD Rebuttal - IMIP is a complement to, not a substitute for, Title III. Inherent in the IMIP concept is that there will be continued defense business to justify the capital equipment purchased. Should this business stop, DoD could be liable for the unamortized remainder of the capital investment covered by IMIP. IMIP without the implicit promise of further business is potentially very expensive to DoD; Title III undergirds the basis for capital investment. (IMIP, it should be recognized, is still in its test-phase; Congress has not yet authorized DoD's potential liability for unamortized contractor equipment. Should IMIP be disallowed, Title III planning becomes imperative.)

F. Page 3, paragraph 6, line 1 - "Navy which is the lead Service in this tri-Service effort has currently placed the proposed TWT, Title III project on the 'backburner' and has no plans to issue a request for proposal (RFP) in fiscal year 1983."

DoD Rebuttal - Navy's decision not to choose the TWT project as its 1983 Title III candidate was not a comment on the project's worth but its size. Navy believed the silent-running bearing project was much easier to finance under reprogramming because it involved less money.

AMMONIUM PERCHLORATE

1. General GAO Comments on Project:

   DoD did not adequately evaluate the available alternatives for encouraging the needed expansion.

2. DoD Rebuttal:

   Contrary to GAO's contact with potential suppliers, our investigation and conversation directly with the suppliers indicates that direct incentives are required.

3. Annual Requirements[1]: Total DoD and NASA:

   1983 - 31.5 million pounds
   1984 - 44.4 million pounds
   1987 - 73.2 million pounds

4. Annual Production[1]: 1982 - 38.7 million pounds
   1984 - 41.9 million pounds
   1987 - 54.5 million pounds

5. Problem: Insufficient capacity to meet national security requirement

6. Reason for Project: Stimulate domestic production to meet increased national requirements

7. Specific DoD Comments on the Classified GAO Statement:

   A. Page 1, paragraph 3, line 1 - "However, DoD did not fully analyze the alternatives for ensuring an adequate supply of AP in the future."

   > DoD Rebuttal - We have used up our alternatives to Title III expansion of capacity for Ammonium Perchlorate (AP). As confirmed by GAO interviews with the industry (page 1, paragraph 2, line 8), they will not expand without some kind of government guarantees or assistance. Loan or loan guarantees could be used; however, this would result in a financial rush to the government without assurance of delivery, while purchase commitments do not result in government expenditures until delivery of acceptable product.

   B. Page 1, paragraph 3, line 2 - "About 60 percent of the total demand for AP in fiscal year 1988 will be attributable to NASA's Space Shuttle Program. Under Title I of the DPA, DoD's requirements for AP have priority over NASA's requirements, because DoD's needs relate to defense programs of the highest national urgency. Since there is more than enough capacity to meet DoD's needs, NASA will be the agency affected by the projected shortfall. In the past when shortfalls were projected, NASA entered into various agreements with the producers, which served to encourage expansion.

---

[1] Source of Information: tri-Service Requirements Study, June 1982

For example, NASA guaranteed one producer the recovery of its expansion costs over a 3-year period.

> DoD Rebuttal - The DoD does have a shortfall. Over half of the missions for the STS are DoD missions which are vital to the Air Force. Without the capability offered by the STS the Air Force Space Command would be forced to seek alternative launch vehicles which would significantly increase cost and result in unacceptable time delays. The Air Force has recognized this fact and has stated it for the record. Any consideration of the use of Title I would only effect commercial application of the STS. Capacity does not exist even by deleting all commercial use (Attachment H).

C. Page 2, paragraph 3, line 14 - "For example, NASA guaranteed one producer the recovery of its expansion costs over a 3-year period. In return, the producer more than doubled its capacity."

> DoD Rebuttal - Contrary to GAO contact with the potential suppliers, our contacts indicate that more direct incentives are required than the rapid depreciation incentive used in the past.

D. Page 2, paragraph 4, line 2 - "Although Office of the Secretary of Defense (OSD) gave the Army the option of funding an AP project in fiscal year 1983, Army officials decided not to fund it."

DoD Rebuttal - The Army failure to issue an RFP for AP was because they decided to concentrate available appropriations and manpower in issuing an RFP for Depleted Uranium. It must be remembered that additional appropriations for Title III were not available in FY 83. Any project undertaken in FY 83 resulted in the cancellation of additional programs to reprogram the necessary funds.

HIGH QUALITY OPTICAL GLASS

1. Page 1, paragraph 3 and Page 2, paragraph 1 - GAO says that the supplier of fused silicon stated it could increase annual production from the current 50,000 pounds to approximately 150,000 pounds by bringing on line available furnaces. The supplier of ultra-low expansion silica glass (U.L.E.) is quoted as saying, "it can easily double capacity with only a minimal investment" to around 200,000 pounds annually. Current capacity is 93,000 pounds annually.

> DoD Rebuttal - DoD's requirements for both types of glass increase to tenfold by 1990 - to approximately 395,000 pounds annually, leaving a 50,000 pound-per-year shortfall. This tenfold increase does not include the NASA requirement.

2. Page 2, paragraph 3, line 6 - "According to the supplier's representatives, this lead time (of 52+ weeks) is strictly a function of the type of product ordered and is not a function of material shortages or production problems."

> DoD Rebuttal - If we need 12 inch blanks, but can only get 3 inch blanks, then there is a production problem. And if our projected requirements are sustained, we will have a serious material problem.

POLYACRYLONITRILE (PAN)

1. General GAO Comments on Project:

GAO's criticism of the PAN proposal is based on a March 1983 tri-Service report on composite materials which recommends no direct action be taken at this time to establish a domestic source of PAN.

2. DoD Rebuttal:

We disagree that the March 1983 tri-Service report on composite materials negates the reason for a Title III project. A key assumption made in the study had proven to be false and the recommendations were clearly wrong. This study is being updated to correct this major defficiency. The assumption made was that a major supplier was going to build a domestic source for PAN. Although the contractor had committed to DoD that it would build a domestic facility, the contractor is building the plant in France to supply the recreation market in Europe. The original tri-Service report recognized this possibility and proposed a contingency plan for this eventuality. This contingency plan recommended direct incentives such as guaranteed buys, low-interest loans or providing funds for qualification. The Title III Program provides the opportunity to implement the contingency plan.

The current domestic source of recreation grade PAN is attempting to qualify its material for DoD needs. It has a high probability of success. We do not believe that this single source will provide adequate capacity or price because the selling price of the graphite fiber made from this PAN is expected to be at least 10 percent higher than that produced from foreign sources.

The GAO Report states that the Title III Program is not likely to accomplish the DoD objectives for domestic sources of PAN. Our discussions with the three major U.S. suppliers of graphite fiber indicate that a Title III Program is necessary to assure the desired two domestic sources by 1986. In addition, it is possible that this program could result in the establishment of three domestic sources. An additional advantage of the Title III Program is the assurance that the domestic producers will be price competitive in the world market upon completion of the program.

3. Annual Requirements[1]: 1983 - 1 million pounds (Attachment I)
increases 1986 - 2 million pounds
1989 - 3 million pounds

4. Annual Domestic Production[1]: No qualified domestic source for aerospace quality

5. Problem[1]: No qualified domestic source; DoD demand exceeding estimated supply

---

[1] Source of Information: 1980 tri-Service Report on Polyacrylonitrile

6. Reason for Project: Establishment of qualified domestic capability

7. Specific DoD Comments on the Classified GAO Statement:

A. Page 1, paragraph 1, line 1 - "The Department of Defense's proposal to purchase Polyacrylonitrile (PAN) fiber using Title III funds is questionable in light of a March 1983 tri-Service report on composite materials which recommends that no direct action be taken at this time to establish a domestic source of PAN."

> DoD Rebuttal - The principal tri-Service report recommendation reads as follows: "The recommended plan of action is for DoD to direct the use of domestic PAN based graphite fibers for at least one-third of the total requirement for all production systems." This is a highly significant direct action recommended by the Army, Navy and Air Force in the tri-Service report and is one method for establishing a domestic source of PAN. The tri-Service recommendation was acknowledged by DoD in our June 1983 memorandum to the Services requesting additional technical information so we could consider the extent of direction or other options necessary. As a result, the Air Force proposed PAN as a Title III project. Therefore, the GAO statement is incorrect and misleading since it ignores the first and principal recommendation in the tri-Service report.

B. Page 1, paragraph 2, line 9 - "It is clear from our review that the present domestic source of PAN, once qualified for DoD use, would meet the target requirement for all of DoD's PAN needs through 1986."

> DoD Rebuttal - Three issues are important which show this statement to be fundamentally flawed. First, DoD is not certain PAN from the present domestic source can be completely qualified for all military use; this is clearly stated in the tri-Service report. Second, to restrict DoD purchases of PAN to only a single domestic source would create an undesirable monopoly with the resultant price increase which could be unacceptable. Third, the true industrial resource problem for PAN availability is post-1986; our report requirement is to establish the base necessary for outyear needs clearly to be vastly inadequate to meet planned military requirements shown in the tri-Service report. Therefore, the GAO statement ignores the post-1986 DoD need for PAN which is the basic thrust of the problem and is clearly shown in the tri-Service report.

C. Page 2, paragraph 1, line 1 - "It is also clear that a second source may enter the market on its own, without Title III incentives."

> DoD Rebuttal - The possibility of firms entering or leaving various industrial sectors and markets is speculation. However, there is a current glut in the graphite fiber market which is a clear disincentive to domestic entry; in fact, new PAN facilities are being installed overseas rather than in the U.S. While a major supplier had committed to DoD to build a domestic source for PAN, the contractor is building the plant in France to supply the European recreation market. The GAO statement should therefore be recognized as reflecting only market speculation when applied to the actual DoD need for secure sources of PAN based carbon fiber.

DEPLETED URANIUM

1. General GAO Comments on the Project:

The proposed use of Title III funds for the purchase of depleted uranium is not justified and it has not been conclusively determined that the free market cannot be reasonably expected to provide the needed capability.

2. DoD Rebuttal:

The Army supports the depleted uranium project and has determined the program to be a valid, viable, defensible project inasmuch as stockpiles were being depleted and no current domestic producer existed.

3. Annual Requirements (including Department of Energy)[1]: 10 million pounds per year

4. Annual Production[1]: None (Army requirements met by drawdown of Department of Energy stockpile)

5. Problem: Current peacetime usage rates will deplete the Department of Energy stockpile of depleted uranium by 1986. Without new peacetime productions, the stockpile inventory will be depleted and we will face a loss of surge and mobilization capability.

6. Reason for Project: Establish domestic capability

7. Specific DoD Comments on the Classified Statement:

A. Page 2, paragraph 3, line 1 - "Currently, there is no domestic production of depleted uranium tetraflouride (UF_4)."

> DoD Rebuttal - There are domestic companies that have the capability to produce UF_4; but are not in production:
>
> 1. Nuclear Metals, Inc. - have no facilities at present.
> 2. TNS (a division of Aerojet Ordnance Co.) - this is an inactive facility that has not operated for years.

B. Page 3, paragraph 5, line 3 - "Our review indicates, however, that stated military requirements for depleted uranium metal may provide enough incentive for existing private metal producers to seek their own sources of UF_4."

> DoD Rebuttal - In August 1983, as a result of the Army's issuance of a "Request for Interest" on depleted uranium, one company has expressed an interest in producing the needed material. Until the Army can substantiate the willingness to capitalize and produce without Title III incentives, depleted uranium remains a viable Title III project.

---

[1] Source of Information: Army Munitions Command

METALLIC BERYLLIUM

DESCRIPTION: The Defense Department (DoD), in cooperation with the Deparment of Energy (DoE), is undertaking a comprehensive review of metallic beryllium requirements and production capability. These two national security agencies utilize 90% of domestic metallic beryllium production. ASD utilizes metallic beryllium for aircraft brakes and aerospace flight instruments. Metallic beryllium is being produced by only one domestic company, Brush Wellman of Cleveland, Ohio. DoE has awarded a $3.4 million R&D study of Brush Wellman to review beryllium plant technology and study new methods of producing beryllium. Estimated completion is mid-1985. In conjunction with DoE's study, the Beryllium Steering Committee will initiate a study to determine future defense requirements. Based on anticipated requirements, the committee will determine plant capacity needed to meet those requirements. It is anticipated that DoD will then fund the renovation of the existing plant or construction of a new facility. If DoD funds the renovation, monies appropriated through the authorities of Title III could complement the renovation efforts. Purchase guarantees would be used to stabilize a traditionally volatile market and ensure optimum efficiencies in the new facility.

BENEFIT ANALYSIS: Increased production of metallic beryllium at Brush Wellman would mean reduced lead times, stabilize system acquisition cost, cost avoidances and increased defense preparedness.

SAVINGS ESTIMATE: Cannot estimate savings, however, retaining Brush Wellman outweighs cost of developing substitutes, and the incalculable but certainly tangible benefit of an active source to meet defense needs. A questions that should be asked is what is the cost of not having a beryllium source; what is the cost of restarting if supply ceases?

BUDGETARY REQUIREMENTS and QUANTITIES: Annual U.S. sales of beryllium is estimated at approximately 15% of the total market. To ensure stability, a guaranteed purchase of up to 50% of any unsold portion of that market share. Government liability would not exceed $7.5 million in current year dollars.

OFFICE OF THE UNDER SECRETARY OF DEFENSE
DEFENSE INDUSTRIAL RESOURCES SUPPORT OFFICE
TWO SKYLINE PLACE, SUITE 1406
5203 LEESBURG PIKE
FALLS CHURCH, VIRGINIA 22041

RESEARCH AND
ENGINEERING

MEMORANDUM FOR DISTRIBUTION

SUBJECT: Beryllium Steering Committee Meeting

A meeting of the Beryllium Steering Committee is set for August 30, 1983, at 9:30 in the Pentagon, conference room 1E801 #6. This will be a progress meeting to discuss the status of the Services' beryllium requirements studies.

Two milestones have been set for the studies:

30 Sept. 1983 - Draft of Individual Service's report

30 Jan. 1983 - Draft of DoD report

Please insure that at least one representative from your Service attends who is knowledgeable of your progress and any problems that need resolving.

Jack
JACK ECK
Staff Specialist
for Materials

MEMORANDUM FOR DISTRIBUTION

SUBJECT: Defense Requirements for Beryllium

Enclosure 1 is a letter sent to DoE projecting DoD non-nuclear beryllium requirements through FY 1988 and assessing the essentiality of beryllium in defense weapon systems. The content of the letter is based on the data sources listed in Enclosure 2. Enclosures 3 through 7 provide additional background information regarding this effort.

This information is provided for your use and appropriate circulation. Please note Attachment 2 of Enclosure 1 is a preliminary draft report and is not enclosed.

My appreciation is extended to all those individuals who contributed to the data presented herein.

RICHARD E. DONNELLY
Acting Deputy Director
Production Resources

Enclosures

cc: J. Persh, OUSDR&E(ET)
E. Dyckman, DIRSO

Prep: E.Dyckman/DIRSO/274-7222/cg/22 FEB 79

COORD: DIRSO

Sig: Mr. Donnelly

OFFICE OF THE UNDER SECRETARY OF DEFENSE
WASHINGTON, D.C. 20301

RESEARCH AND
ENGINEERING

Major General J. K. Bratton, USA
Director of Military Application
Department of Energy
Washington, D.C. 20545

Thru: Chairman, Military Liaison Committee
to the U.S. Department of Energy

Dear General Bratton:

In response to your request, a comprehensive projection of DoD beryllium requirements through FY 1988 as well as an assessment of the essentiality of beryllium in defense weapon systems has been completed. Defense non-nuclear requirements for beryllium metal, beryllium alloys and beryllium oxide (ceramics) through FY 1988 are presented in Attachment 1.

As indicated in your May 1978 letter and subsequently supported by our inquiries with primary beryllium producers, it is most likely implementation of the proposed Occupational Safety and Health Standard for Beryllium (29 CFR Part 1910) will cause U.S. industry to discontinue beryllium metal production. To assess the impact this loss would have on defense programs, a Federal Contract Research Center (FCRC) was tasked to (a) identify defense applications for beryllium metal, (b) determine the reasons for selection of beryllium metal, (c) identify possible substitute materials and (d) estimate the cost and schedule requirements to develop suitable replacement hardware not using beryllium metal. The preliminary draft of the FCRC report is provided as Attachment 2.

In terms of tonnage, DoD's beryllium metal requirements are incidental to the time, dollar investment and defense capability lost if beryllium metal becomes unavailable. The four areas in which DoD programs are most directly impacted include:

1. Guidance systems, which are viewed as the most critical due to DoD's total dependence on beryllium in gyroscope components for the past 20 years. These advanced inertial guidance systems are essential to meet the accuracy requirements of present and future weapon systems.

2. Optical systems for land, sea and airborne high energy laser pointing and tracking and weapon control designs are dependent on the unique physical properties of beryllium metal. There are no

known substitutes for beryllium metal in the foreseeable future for these optical applications. Space based optical systems and classified space programs also use beryllium very effectively and significant redesign would be required to provide the stability inherent in beryllium components.

3. Propulsion and attitude control motors used in satellites and missiles require beryllium thrust chambers due to the metal's high heat absorption capability. Redesign of thrust chambers using alternate materials would have a serious impact on satellite and missile systems' performance.

4. Structural applications for light weight, stiff beryllium metal, such as spacers and bulkheads in missiles and satellites, have adequate substitutes. However, trade-off studies indicate replacement of beryllium metal with composite materials may be accomplished satisfactorily only with significant weight penalty.

This review of DoD requirements has served to reaffirm my conclusion that the continued availability of beryllium is essential to present DoD missions. The cost for development of alternative materials and designs, which meet present performance standards in all applications, would be several hundreds of millions of dollars. Even if it were possible to develop some new materials, the development cycle would occupy at least ten years.

I join in your concern over the impending loss of U.S. commercial beryllium metal production and stand ready to support the exploration and evaluation of alternate strategies for preserving this essential capability.

Sincerely,

SIGNED
DALE W. CHURCH
Deputy Under Secretary
(Acquisition Policy)

ATTACHMENTS

A. Air Force System Command Title III Beryllium Project

B. Beryllium Results Memo (Due October)

C. 1979 Beryllium Study

D. Brush Wellman Letter

E. Letter from Cabot on Beryllium Production

F. Preliminary Beryllium Air Force Requirements

G. Navy Title III Noise Quiet Bearing Project

H. Ammonium Perchlorate Chart

I. DoD Estimated Polyacrylonitrile Requirements

DOD NON-NUCLEAR REQUIREMENTS FOR BERYLLIUM METAL — 8 February 1979

APPLICATION	SYSTEMS IMPACTED	ADVANTAGES OF BERYLLIUM	ALTERNATIVES TO BERYLLIUM			BERYLLIUM USAGE		
			MATERIALS	RATING	PENALTY	Recent Historical TH LB/YR	Future TH LB/Y	umulative FY 79-8 TH LB
GUIDANCE						20	24	240
Inertial Navigation System Components: gyroscope accelerometer housing/frame gimbal equatorial ring diverter attitude driver band cylinder parts magnetic memory unit balancing screw servo valve receiver band integrating receiver bearing	Navy Nuclear Submarines Surface Ships Missiles (including Trident) Air Force Aircraft Missiles (including Minuteman and MX)	High modulus of elasticity High heat capacity Good thermal conductivity Low density Compatibility with floatation fluids	Aluminum Invar Magnesium Composites	Poor Poor Poor Poor	Increased volume Low modulus of elasticity Unstable Anisotropic			
			General:		Loss in dimensional stability Loss in accuracy Increased volume and weight Require complete redesign of components and system			
OPTICS						9	11	110
Mirror surfaces and mirror support structures in: Air, Ship and Land Precision Optical Systems Infra-red Surveillance Systems High Performance Steering Mirrors Scan Mirrors Telescope Mirrors High Energy Laser Mirrors Gunsights	Army Tank Sighting Control System High Energy Laser Field Telescope Navy Shipborne and Airborne High Energy Laser & Tracking System	Dimensional stability High heat capacity Low density High modulus of elasticity Low moment of inertia Amenable to liquid cooling	Composites Nickel-Plated Surfaces Ceramics Molybdenum	Poor Moderate Poor Poor	Poor stiffness High density High density High density			
			General:		Loss in stabilization Require active cooling system Increased weight			

DOD NON-NUCLEAR REQUIREMENTS FOR BERYLLIUM METAL

8 February 1979

APPLICATION	SYSTEMS IMPACTED	ADVANTAGES OF BERYLLIUM	ALTERNATIVES TO BERYLLIUM			BERYLLIUM USAGE		
			MATERIALS	RATING	PENALTY	Recent Historical TH LB/YR	Future TH LB/YR	Cumulative FY 79-8 TH LB
OPTICS (CONT'D)								
	Air Force		General:		Increased power requirement			
	Airborne High Energy Laser Pointing & Tracking System Optical Platforms				Increased number of solar cells Require significant redesign of components and system			
	Space Systems							
	Defense Meteorological Satellite Program Classified Space Programs							
	NASA							
	Thematic Mapper Shuttle Infra-red Telescope Shuttle Stable Platform							
PROPULSION						2	3	30
Thrust chamber in:	Army	High heat capacity	Coated refractory metals (tantalum; columbium)	Poor	High density; poor thermal conductivity; limited oxidation resistance; coatings ablate and contaminate optical surfaces			
Satellite Propulsion Systems Interceptor Motors Missile Engines	Exo Atmosphere Interceptor Homing Interceptor	Good thermal conductivity High melting point						
	Air Force	Good oxidation resistance	Aluminum Stainless steel	Poor Poor	Poor heat absorption; poor thermal conductivity; low heat capacity; increased weight			
	Minuteman Post Boost Wafer Engine MX Post Boost Wafer Engine and Attitude Control	Low density	Copper Nickel	Poor Poor				

DOD NON-NUCLEAR REQUIREMENTS FOR BERYLLIUM METAL

8 February 1979

APPLICATION	SYSTEMS IMPACTED	ADVANTAGES OF BERYLLIUM	ALTERNATIVES TO BERYLLIUM			BERYLLIUM USAGE		
			MATERIALS	RATING	PENALTY	Recent Historical TH LB/YR	Future TH LB/YR	Cumulative FY 79-88 TH LB
PROPULSION (CONT'D)	Air Force (Cont'd) S.D.S. Attitude Control NASA Mars Mariner Viking Orbitor	Low vulnerability to damage by nuclear intercepts	General:		Require insulation and increased engine weight and fuel consumption. Require complete re-design of interceptor systems.	38	25	250
STRUCTURES								
Reentry Vehicle (R/V) Components: heat shield nose tip shell cover retaining ring support fitting fasteners penetration aids	Army Intercept R/V and Structure Navy SLBM R/V (Polaris, Poseidon)	High modulus of elasticity Low density High heat capacity Good thermal conductivity	R/V Applications: Composites	Good	Increased weight; Ablative; more vulnerable to damage by nuclear intercepts			
Missile and Satellite Components: spacer equipment rack skin panels and door stiffener ring solar array frame heat shield shingle antenna boom	Air Force Minuteman Spacer AMaRV R/V SDS Attitude Control Space Systems Defense Meteorological Satellite Program Classified Space Program	Low vulnerability to damage by nuclear intercepts	Other Structural Applications: Steel Aluminum surfaced with nickel alloy Composites	 Poor Poor Moderate	Increased weight; low heat capacity; low thermal conductivity; lower stiffness; inferior fatigue characteristics; more difficult to handle			

DOD NON-NUCLEAR REQUIREMENTS FOR BERYLLIUM METAL

8 February 1979

APPLICATION	SYSTEMS IMPACTED	ADVANTAGES OF BERYLLIUM	ALTERNATIVES TO BERYLLIUM			BERYLLIUM USAGE		
			MATERIALS	RATING	PENALTY	Recent Historical TH LB/YR	Future TH LB/YR	Cumulative FY 79-88 TH LB
STRUCTURES (CONT'D)								
Missile and Satellite Components (Cont'd):	NASA		General: Use of beryllium in structural components reduces total missile system weight without affecting performance, at a net savings of several hundreds of millions of dollars					
bearing shaft & housing umbilical door bulkhead laser support cylinder switch plate reflector-attenuator motor support cover rotating mount & housing fastener fuel cell support radiator window frame & post	Space Shuttle TDRS Communications Satellite							
Aircraft Components:								
wingbox rudder								
THERMAL.								
Aircraft Brake Components:	Navy	Good thermal conductivity	Composites	Good	Require re-design of brake components for S-3A, F-14 and C-5A.	8	2	20
stator disk rotor end plate	S-3A Aircraft F-14 Aircraft	Low density						
	Air Force	High heat capacity			No penalties for other aircraft.			
	C-5A Aircraft							
TOTAL BERYLLIUM METAL						77	68	680
Plus Beryllium Aluminum and Beryllium Nickel Alloys						+ 6	+ 7	+ 70
GRAND TOTAL BERYLLIUM METAL						83	75	750

8 February 1979

DOD NON-NUCLEAR REQUIREMENTS FOR BERYLLIUM ALLOYS *

APPLICATION	CONTAINED BERYLLIUM USAGE		
	Historical TH LB/YR	Future TH LB/YR	Cumulative FY 79-88 TH LB
FABRICATED METAL PRODUCTS	2	3	30
nuclear reactors			
NON ELECTRICAL MACHINERY	26	31	310
dies and tools molds welding equipment office, computing, and accounting machines			
ELECTRICAL MACHINERY	27	32	320
switchgear household appliances telephone and telegraph appliances radio and television			
All containing the following components:			
connector socket switch spring temperature sensor pressure sensor bellow clip housing			
TRANSPORTATION EQUIPMENT	14	17	170
Electrical components listed above and below used in tanks, aircraft, and missiles:			
fuse fire unit seal			
INSTRUMENTATION	2	3	30
Electrical components as listed above used in instruments for measurement, display and control			
TOTAL BERYLLIUM ALLOYS	71	86	860
Subtract Beryllium Content of Beryllium Aluminum and Beryllium Nickel*	- 6	- 7	- 70
TOTAL BERYLLIUM COPPER ALLOY	65	79	790

---

* Breakdown of total beryllium required to produce beryllium alloys: 92% beryllium copper; 7% beryllium aluminum; 1% beryllium nickel. Beryllium hydroxide is used to produce beryllium copper but beryllium metal pellets are used to produce beryllium aluminum and beryllium nickel. Therefore, 8% of the total beryllium consumed in beryllium alloys is attributed to beryllium metal requirements.

6 February 1979

DOD NON-NUCLEAR REQUIREMENTS FOR BERYLLIUM OXIDE (CERAMICS)

APPLICATION	CONTAINED BERYLLIUM USAGE		
	Recent Historical TH LB/YR	Future TH LB/YR	Cumulative FY 79-88 TH LB
ELECTRICAL AND ELECTRONIC	16	19	190
Aircraft, Missile, Nuclear Reactor and Support Instrumentation Components:			
microwave tube			
insulator			
transistor base			
semiconductor package			
substrate			
resistor core			
microwave			
antenna window			
helix support			
stem			
radome			
transformer coil			
laser tube			
conduction cooling block			
gyroscope			
rocket nozzle			
crucible			
thermocouple tubing			
TOTAL BERYLLIUM OXIDE	16	19	190

References

1. "Report of Interagency Beryllium Survey," Office of the Director of Defense Research and Engineering, March 1969 (SECRET)
2. "OSHA Regulations for Beryllium and DoD Applications," S. L. Channon, Aerospace Corporation, February 1979 (Preliminary draft)
3. "Beryllium - Utilization/Availability," R. A. Wood, Battelle Columbus Laboratories, MCIC SR-75-02, July 1975
4. "Defense Requirements for Beryllium," Army, Navy, Air Force and Defense Logistics Agency Responses to Subject Memorandum from the Deputy Under Secretary of Defense (Acquisition Policy) dated 27 June 1978
5. Personal Communications, C. Downer (Defense Industrial Resources Support Office - DIRSO) and B. Petkof (U. S. Bureau of Mines), 1 February 1979
6. Personal Communications, E. Dyckman (DIRSO) and R. C. Reiley (Department of Commerce), 22 January 1979
7. Personal Communications, E. Dyckman (DIRSO) and N. Bass (Brush Wellman) 5 February 1979
8. "Mineral Commodity Summaries 1979," U. S. Bureau of Mines

Enclosure 2

FILE . Beryllium

BRUSHWELLMAN
ENGINEERED MATERIALS

Brush Wellman Inc.
17876 St. Clair Avenue
Cleveland, Ohio 44110
Phone 216/486-4200

July 25, 1980

Mr. Ralph Caudle - DP 25
Director, Division of Operations
Office of Military Applications
Mail Stop A-362
U. S. Department of Energy
Washington, D. C. 20545

Attention: Mr. Glenn Taylor

Dear Mr. Caudle:

Enclosed for your review and consideration is a proposal by Brush Wellman Inc. for financing the renovation of Brush Wellman's metallic beryllium production facilities at its Elmore, Ohio, plant.

The necessity for such renovation and the need for Government funding assistance has been informally discussed with representatives of the Office of Military Applications, the Albuquerque Operations Office, the Rocky Flats Area Office and, in less detail, with Department of Defense personnel.

A brief review of existing statutory authorities indicates that Section 162 of the Atomic Energy Act would provide adequate authority for carrying out the objectives of the enclosed proposal.

We would appreciate meeting with representatives of the Department of Energy at the earliest possible date to discuss our proposal and any other beryllium matters of interest.

Sincerely,

Martin B. Powers

Martin B. Powers
Vice President

Enclosure

cc: Mr. Michael Guy, Albuquerque Operations Office, + Enclosure

PROPOSAL OF BRUSH WELLMAN INC.
FOR UPGRADING OF BERYLLIUM METAL PLANT AT ELMORE, OHIO

In the past quarter century metallic beryllium has become an increasingly important material of construction for a variety of critical defense-related programs of the Departments of Energy (DOE) and Defense (DOD) and the National Aeronautical and Space Agency (NASA). Currently, it is an irreplaceable material in several strategic systems whose production has just begun or is about to begin. The maintenance of an uninterrupted supply of beryllium to these systems is essential to our national defense.

For a variety of economic and environmental reasons, Brush Wellman (Brush) is the only remaining supplier of beryllium to the U. S. Government. The facilities for the production of metallic beryllium (Metal Plant) at Brush's Elmore, Ohio manufacturing complex were constructed in 1958. The Metal Plant was subsequent- ly expanded and modified several times. Attached as Exhibit I is a description of the Metal Plant processes and equipment.

Major elements of the Metal Plant are in need of renovation. For the past decade conditions in the beryllium marketplace, together with the threat of the imposition of unattainable occupational health and environmental regulations by Federal Agencies, have been such that the two then active beryllium producers (the other producer being Kawecki Berylco Industries which announced its withdrawal from beryllium production in May of 1979) could not realistically justify investment of corporate funds for the replacement and necessary modernization of metal plant equipment and processes.

Brush estimates that some $50 million would be required to redesign operating processes and replace or upgrade existing equipment in the Metal Plant. This is only a preliminary estimate without benefit of detailed engineering design or cost computations. By contrast, a similar preliminary estimate of the cost to construct a complete new "Metal Plant Equivalent" as a Government Owned and Contractor Operated (GOCO) facility would be $150 million. The major reason for the cost difference between the two approaches is that much of the existing Brush Metal Plant will not require renovation.

Brush has a long history of serving as supplier of beryllium to the Government and its contractors. Although Brush cannot justify, as a reasonable business risk, an investment of some $50 million in a high risk, low volume business, the company wishes to remain a dependable supplier of beryllium to the Government. Similarly, both DOE and DOD have stated that they do not want to incur the increased capital and operating costs that would result from building and operating a GOCO beryllium plant. In Mid-1979 a meeting was held in the DOE offices at Germantown in which Brush and DOE personnel agreed upon the following conditions for continued production by Brush of beryllium in Brush's privately owned facilities.

1. DOE would exert its best efforts to convince OSHA to revise its proposed beryllium standard.

2. The Government would encourage and support steps taken by Brush to make the production of metallic beryllium an economically viable business.

3. The Government would not, directly or indirectly through its GOCO agents, engage in the manufacture of mettallic beryllium.

In discussions with Brush managment DOE and DOD personnel have encouraged Brush to renovate its Metal Plant as necessary to meet the long term beryllium needs of the Government. Both Agencies recognize that Brush can not make the necessary investment without some form of Government guarantee which will permit Brush to recover its investment. The Agencies do not have the technical program information necessary to contract now for their total procurement of beryllium over the next decade. They do, however, have the authority to assure the availability of beryllium by underwriting the cost of replacement and modernization of the Brush Metal Plant. The purpose of this Proposal is to set forth a mutually acceptable mechanism of such underwriting.

Proposed Contractual Arrangement

It is proposed that Brush enter into an Agreement with DOE to finance the renovation of the Metal Plant. It is expected that the cost of this work, both in total and in its periodic increments, will be allocated among Government Agencies by the Agencies themselves and such allocations and inter-agency transfers will not be effected through the Brush contractual arrangement.

It is proposed that the Agreement be in two phases. Phase 1 would be engineering and design under a cost reimbursement contract, with an appropriate fee, covering the following areas of effort:

Item 1. Review of the fluoride furnaces, reduction furnaces and powder handling operations.

Item 2. Modification of the processes involved in these three operations and redesign of the equipment utilized.

Item 3. Construction of pilot plant facilities to evaluate process and equipment modifications.

Item 4. Operation of pilot plant facilities and, if necessary, further design and modification as required by pilot plant data.

Item 5. Review of all other processes and equipment in the Metal Plant.

Item 6. Preparation of detailed plant upgrading program and schedule with related cost estimates.

Item 7. Reports.

The detailed Scope of Work for Items 1-7 is set forth in Exhibit II. This Phase I would be funded through progress billings for costs, and the related fee, incurred on a monthly basis, payable within 30 days.

Phase II would cover the actual modification and upgrading of the Elmore Metal Plant. This would include detailed engineering design, procurement and installation of equipment and construction of the facilities.

The financing of Phase II would be in the form of a direct loan or loan guarantee from DOE to Brush. Prior to the beginning of each year Brush will furnish an estimate of annual expenditures, which will be adjusted during the year to actual expenditures, (Annual Funding Amount), the funds for which will be advanced. These funds would be used to finance authorized expenditures.

Repayment of each Annual Funding Amount would be in equal installments over 10 years beginning three years after the funds were obtained. Provided however, repayment would be related to the procurement of metallic beryllium by the Government, either directly or through its chain of contractors and subcontractors. Should the total of such procurement of metallic beryllium fail in any year to reach 50,000 pounds, the principal payment(s) due that year will be proportionately reduced with the unpaid amount deferred, interest free, to the next succeeeding year after the last scheduled principal payment. Each subsequently deferred principal amount would be repaid in the first succeeding year in which no other principal payment is due.

Interest, if any, shall be calculated on the unpaid balance exclusive of deferrals and shall be paid annually. Provided however, that in any year in which procurement fails to reach 50,000 pounds, the interest due will be proportionately waived.

In determining selling prices for metallic beryllium produced by this facility, Cost Accounting Standards, including CAS 414, in effect at the time shall be applicable, except that the bertrandite ore contained in such products will be priced at market value. This agreement will not preclude the negotiation of milestone or progress payments for working capital requirements.

CABOT P. O. Box 1296, Reading, PA 19603; Telephone 215/921-5000; TWX No. 510-651-0677

A Division of Cabot Corporation

Mr. John Meinhardt
Director of Operations
Office of Military Applications
Department of Energy
Germantown, MD

Dear Mr. Meinhardt:

For many years our company was a major supplier of both beryllium metal and ceramic grade beryllium oxide to the U.S. Government and commercial users. Even though the production of these two materials was discontinued for sound, commercial reasons several years ago, we continue to be a major producer of beryllium-containing alloys.

Although we have no immediate intent to do so, we have been considering the feasibility of re-entering the ceramic grade beryllium oxide business. Depending upon the results of our current study, we may further examine the feasibility of beryllium metal production later.

Since the U.S. Government is the largest consumer of both materials, we would appreciate some comments from your organization regarding current and future demand. For ceramic grade BeO, please indicate how much is acquired as powder, and how much is acquired as parts. We would appreciate your reviewing your future requirements as far forward as you can practically project them. Considering the U.S. Government's dominant user position in the total market, will it consider any kind of support to our company to become the second free world producer? Support might manifest itself either as financial for purposes of facilities development or long-term contracts to purchase a certain portion of the output. We would appreciate any comments relative to these or other ideas.

If you require further information from us, please advise. Thank you very much for your consideration of the foregoing request.

Very truly yours,

Dale J. Richards
Assistant General Manager

DJR:dlm

5654A

JANE POWERS
D.890 – Feb. 1983

AF BE REQUIREMENTS

ASSUMES MX PRODUCTION STARTING IN FY83

	83	84	85	86	87
with BE Brakes C-5B	5915	9115	9215	31,419	26,613
with C Brakes C-5B*	4745	5605	4535	6,915	6,915

By system / segment

F-16 A .17 lbs
B .17 "
C 1.99 "
D 2.00 "
E 2.13 "

* MOST PROBABLE NUMBER

F-15 A/E 3.55 lbs

A-10 A/B .06 lbs

C-5B CARBON BRAKES 30.71 lbs
BE BRAKES 1221.8 lbs

F-4 3.81 lbs

MX 244 lbs

SPACE AV 2000 lbs yr

CREATING NEW CAPACITY - JAPANESE SOLE SOURCE

APPLICATION	NAVAL PLATFORM	FOREIGN SOURCE ITEM	MANUFACTURING PROGRAM	R&D PROGRAM	ESTABLISH DOMESTIC SOURCE*	FY 84/FUNDING
Motors	Trident Submarine	Noise Quiet Bearings	Anderometer Vibrating Test Machine	State-of-the-Art Technology	New/Upgrade Manufacturing Lines	$4M
Pumps						
Motor Generator Sets	Submarine Classes -688 -616 -637				New Quality Assurance Equipment Line	
Compressors						
Ventilation Fans	Nuclear Cruisers					

Assumption: Domestic Source is an established bearing manufacturer.

AMMONIUM PERCHLORATE REQUIREMENTS AND PRODUCTION
(Millions of Pounds)

REQUIREMENTS

	FY 83	FY 84	FY 85	FY 86	FY 87	FY 88	FY 89	FY 90
Army	8.2	9.2	11.1	14.2	14.9	16.2	8.5	2.5[a]
Navy	2.2	4.4	5.5	6.4	5.8	5.8	5.8	5.8
Air Force	4.1	4.4	6.2	6.2	7.0	6.7	2.8[b]	3.1[b]
Total DOD	14.5	13.0	22.8	26.8	27.7	28.7	17.1[b]	11.4[a,b]
Total NASA	17.0	26.4	30.7	39.6	45.5	47.5	47.5	47.5
Total Requirements	31.5	44.4	53.5	66.4	73.2	76.2	64.6[b]	58.9[a,b]

PRODUCTION CAPACITY

Pacific Engineering[c]	29.0	32.5	32.5	32.5	32.5	32.5	32.5	32.5
Kerr-McGee[d]	14.0	14.0	28.0	28.0	28.0	28.0	28.0	28.0
Total Capacity	43.0	46.5	60.5	60.5	60.5	60.5	60.5	60.5
Total Capacity at 90%	38.7	41.9	54.5	54.5	54.5	54.5	54.5	54.5

Production Shortfall (-) or Excess (+)	+7.2	-2.5	+1.0	-11.9	-18.7	-21.7	-10.1[b]	-4.4[a,b]

NOTES:
- a - Complete Army requirements unavailable at this time.
- b - Does not include M-X requirements which are unavailable at this time.
- c - Could expand capacity from 32.5M pounds to 50M pounds within about 2 years.
- d - Could expand capacity from 28M to 36-40M pounds within about 1 year. Beyond 40M pounds would require a new building.

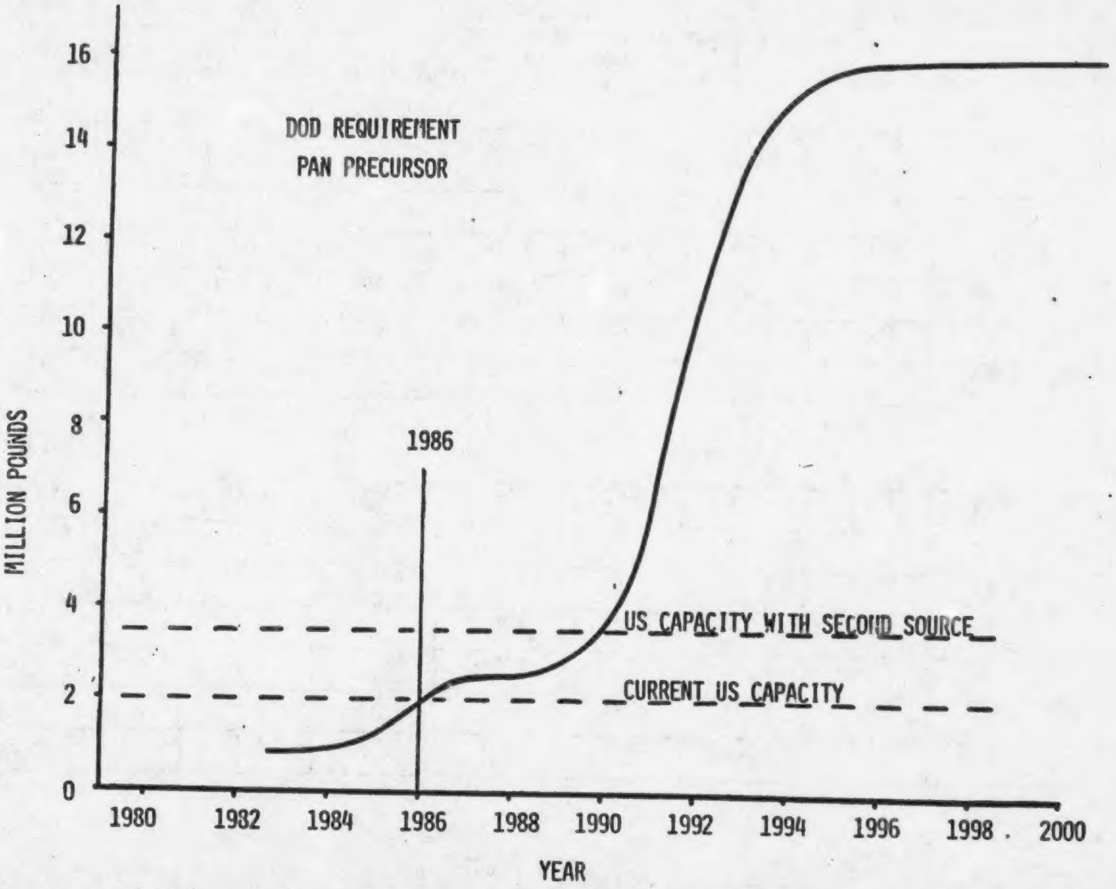

DOD REQUIREMENT
PAN PRECURSOR
MILLION POUNDS
16
14
12
10
8
6
4
2
0
1986
US CAPACITY WITH SECOND SOURCE
CURRENT US CAPACITY
1980
1982
1984
1986
1988
1990
1992
1994
1996
1998
2000
YEAR

FIG 6

55%

Senator **Trible**. I would invite you further to give some thought to some sort of request. In terms of dollars, I just cannot see how a $200 million request can be justified at this point. I recognize the need, however, to proceed with this inquiry. I recognize how essential it is that we have adequate critical and strategic raw materials and other products to meet our economic and military needs and perhaps some reduced dollars will permit you to begin that process. But when we are struggling with a $200 billion deficit, we are simply not in a position to appropriate and authorize hundreds of millions of dollars for which there is no precise purpose today, and for which there may well not be a national requirement that those dollars be spent. And I say this as someone who you must know is one of this administration's staunchest supporters, someone who has been one of the most active advocates of a strong national defense in this Congress.

I am troubled, and I would like you to respond to the points that have been raised, if you would.

Is there anything else that anyone else feels constrained to add to the proceedings at this point?

If not, I thank you for being here. And let me finally say this is an important program. It is our intention to do everything we can to see that it is sustained and that it is allowed to go for many years, as opposed to many months.

[Whereupon, at 11:15 a.m., the closed session adjourned.]

[Additional material supplied for the record follows:]

UNITED STATES GENERAL ACCOUNTING OFFICE
WASHINGTON, D.C. 20548

RESOURCES, COMMUNITY,
AND ECONOMIC DEVELOPMENT
DIVISION

September 29, 1983

The Honorable Paul Trible
Chairman, Subcommittee on
Federal Credit Programs
Committee on Banking, Housing,
and Urban Affairs
United States Senate

Dear Mr. Chairman:

In September 15, 1983, testimony before your Committee on the Defense Production Act, we provided our evaluation of the nine projects considered by the Department of Defense (DOD) to be high priority for title III funding in fiscal years 1983 and 1984. In general, we found that DOD's projects do not adequately justify the national security benefits to be derived and/or the economic costs associated with the federal subsidy. For six of the projects, a weakness in the defense industrial base had not been identified. Moreover, the cost-effectiveness of title III compared to other alternatives was not adequately justified for any of the nine projects.

In a September 21, 1983, letter to you, the Acting Under Secretary of Defense for Research and Engineering provided DOD's position on our statement as well as general and specific comments on our assessment of each DOD project. Our assessment had been provided to you under separate cover on September 13, 1983, because the information contained therein had been classified by DOD. On September 27, 1983, your office asked us to evaluate DOD's position and comments to determine if they warrant revising our conclusions and recommendations and provide a response to your Committee by September 29, 1983.

DOD's specific comments on our assessment of each project provided little new information on which to reevaluate the adequacy of the project justifications. Moreover, some of the excerpts from our project assessments were taken out of context by DOD while some of DOD's "rebuttals" simply restated our position. Therefore, our conclusions and recommendations remain unchanged.

Our classified project assessments were quoted extensively by DOD in its unclassified September 21, 1983, letter to you, and the Acting Under Secretary has requested that his letter be an intergral part of the hearing record. To provide a balanced perspective concerning the viability of the nine projects, we believe that our project assessments should be declassified by DOD and also included as a part of the hearing record.

DOD's general comments focus on the issue of whether DOD should meet the criteria for selecting title III projects, developed by DOD and the Office of Management and Budget, before or after funds are authorized and appropriated. Based on our review of the nine projects which included an evaluation of the project justifications and available supporting documentation as well as discussions with responsible DOD, Army, Navy, Air Force, National Aeronautics and Space Administration, and industry officials, we believe that the criteria can be met prior to receiving a funding appropriation. For example, a weakness in the defense industrial base had not been identified for six of the nine proposed projects. This analysis is not contingent primarily on cost data from industry, but rather on justification from DOD that the free market cannot be reasonably expected to provide a required national security capability in a timely manner. Moreover, while DOD identified other funding alternatives in its general comments, it still did not adequately justify the cost-effectiveness of title III compared to other alternatives for any of the nine projects.

We appreciate the difficulty of establishing a title III program which reaches beyond raw materials production to include intermediate and processed materials. However, we continue to believe that the Congress may wish to consider amending title III to ensure that the national security benefits and economic costs of all title III projects proposed by federal agencies are adequately justified and to give the Congress ample opportunity to review each title III proposal prior to entering into any commitment to provide financial or other assistance.

Sincerely yours,

F. Kevin Boland

F. Kevin Boland
Senior Associate Director

CONGRESSIONAL BUDGET OFFICE
U.S. CONGRESS
WASHINGTON, D.C. 20515

Rudolph G. Penner
Director

October 5, 1983

The Honorable Jake Garn
Chairman
Committee on Banking, Housing,
and Urban Affairs
United States Senate
Washington, D.C. 20510

Dear Mr. Chairman:

Pursuant to Section 403 of the Congressional Budget Act of 1974, the Congressional Budget Office has prepared the attached cost estimate for S. 1852, a bill extending by five years the expiration date of the Defense Production Act of 1950, as ordered reported by the Senate Committee on Banking, Housing and Urban Affairs on September 28, 1983.

Should the Committee so desire, we would be pleased to provide further details on this estimate.

Sincerely,

Rudolph G. Penner
Director

cc: The Honorable William Proxmire
Ranking Minority Member

CONGRESSIONAL BUDGET OFFICE

Cost Estimate

October 5, 1983

1. BILL NUMBER: S. 1852

2. BILL TITLE:

   Defense Production Act Amendments of 1983

3. BILL STATUS:

   As ordered reported by the Senate Committee on Banking, Housing, and Urban Affairs on September 28, 1983.

4. BILL PURPOSE:

   This bill amends Title VII of the Defense Production Act of 1950 by changing the expiration date from September 30, 1983 to September 30, 1988. The Act authorizes the following programs:

   - o Industrial defense mobilization activities of the Department of Commerce;
   - o Certain emergency preparedness activities funded in the Federal Emergency Management Agency; and
   - o The administration and disposal of inventory of materials procured under Section 303 of the Defense Production Act. This is funded within the General Services Administration under the Federal Property Resources account.

   This bill also amends Title III of the Defense Production Act by placing restrictions on the use of Title III authority to provide loans, loan guarantees or purchase commitments to domestic industries essential to the national defense.

5. ESTIMATED COST TO THE FEDERAL GOVERNMENT:

   For the five-year period covered by the extension, estimated authorizations are approximately $7 million with associated outlays estimated to be slightly less than $7 million. These costs fall within budget functions 050 and 370.

(By fiscal year, in millions of dollars)

	1984	1985	1986	1987	1988
Extension of termination date to March 31, 1988:					
Budget Function 370					
Estimated authorizations	1	1	1	1	1
Estimated outlays	1	1	1	1	1
Budget Function 050					
Estimated authorizations	*	*	*	*	*
Estimated outlays	*	*	*	*	*

* Less than $500 thousand.

Basis for Estimate

This estimate assumes that the full amount of authorizations provided in this bill will be appropriated prior to each fiscal year.

This estimate for the cost of extending the existing provisions of the Defense Production Act is based on the Administration's plans for 1984 through 1988. These would require slightly more than $1 million for the Department of Commerce mobilization activities and approximately $0.2 million for the activities carried out by the Federal Emergency Management Agency for each fiscal year of the extension. No programs are planned for the General Services Administration.

6. ESTIMATED COST TO STATE AND LOCAL GOVERNMENTS: None.

7. ESTIMATE COMPARISON: None.

8. PREVIOUS CBO ESTIMATE: An estimate for S. 855, a bill extending the expiration date of the Defense Production Act of 1950 to March 31, 1988, was prepared for the Senate Committee on Banking, Housing, and Urban Affairs in March of this year.

   Estimates were also prepared of H.R. 2782, another bill amending the Defense Production Act of 1950, as reported by the House Committees on Banking and on Education and Labor. The cost estimates for S. 1852 and H.R. 2782 differ because the bills amend the Act in substantially different ways.

9. ESTIMATE PREPARED BY: Barbara M. Hollinshead
(226-2840)

10. ESTIMATE APPROVED BY:

C. G. Nuckols
for James L. Blum
Assistant Director
for Budget Analysis

Federal Emergency Management Agency
Washington, D.C. 20472

Honorable Jake Garn
Chairman, Committee on Banking,
Housing and Urban Affairs
United States Senate
Washington, DC 20510

Dear Mr. Chairman:

The Defense Production Act of 1950 is due to expire on September 30, 1983. I urge your support for a 5-year extension of the Act.

Under Executive Order 10480 which implements the Defense Production Act, the President has specifically charged the Federal Emergency Management Agency with the responsibility for coordinating the mobilization activities of the executive branch of the Government. From my vantage point of coordinating mobilization preparedness, I want to strongly emphasize the fundamental importance of stabilizing the Act for a period of several years. Failure to extend the Act would result in serious delay to critical defense programs and would gravely jeopardize our ability to prepare for national security emergencies. The Act is a bulwark of our mobilization posture.

We need more than another brief extension. I believe that we must have a multiyear extension of the Defense Production Act in order to build solid and effective programs. We must also avoid compromising the value of this vital legislation with amendments which are unnecessary to its central purpose. If its continuity is uncertain and its provisions are subject to frequent change, then our national preparedness can only be weakened.

In summary, I strongly urge the committee to consider this the time to put the Defense Production Act on a firmer basis and extend it for a 5-year period.

Sincerely,

LO Giuffrida

Louis O. Giuffrida
Director

Sept 15, 1983
STATEMENT OF J. H. McQUISTON
on Defense Production Act Extension

McQuiston Associates
Los Angeles, California 90038

Mr Chairman and Members of the Committee:

McQuiston Associates is a "think tank" which for 23 years has probed technical and managerial problems. The staff members have engaged in, and advised on, Defense Production Act (DPA) contracts, from its inception in 1950 to present.

For several years, I have conducted a project analyzing one aspect of DPA: namely, the effect upon industry of indiscriminately applying DPA as now practiced by Department of Defense (DOD) contracting officers.

I support an extension of this 33-year old Act. However, I believe the time has arrived for this Committee to examine the malefaction caused by DOD's indiscriminate use of DPA and thereafter to adjust the standards of accountability presently in DPA.

Consequently, I recommend that DPA should not be extended beyond a date which will accommodate such reasonable oversight and correction as this Committee may determine is necessary. Accordingly, I believe that another six-month extension would be too short, and two years would be too long.

I suggest that you should extend DPA until the 98th Congress, Second Session, adjourns sine die, and that before that adjournment you should conduct your oversight and correction.

Undisputably, DOD uses DPA indiscriminately and incorrectly. General Accounting Office statements such as at 58 C.G. 415 (1979) note that artificial and high priorities are being engineered just to evade review; even now, evidence shows that the practice is still being maintained. Even the basic invocation for DPA is pre-printed on DOD's standard procurement forms (see examples attached), so it would be difficult if not impossible for any DOD procurement, worthy or not, to escape a "priority" rating.

S. Rep. 98-50 listed DOD's share of all government procurement as $117 billion out of $147 billion in FY 1982. Therefore, virtually all government contracting apparently involves DPA certifications.

The pervasive and unthinking presence of DPA in government invitations to contract creates a substantial problem that actually may be eroding the defense industrial base. When a prospective contractor receives a government invitation, alleging that the procurement is critical enough to waive conventional procurement methods together with a promise of immunity and assistance for hard-to-procure items, naturally the prospective contractor's response will be affected thereby. Yet, actually the contracting officer may have no intention of giving the contractor any help; in fact, 41% of all cases in ASBCA in FY 1982 involved disputes where the contracting officer refused to provide DPA help. The overwhelming number (69%) of cases in ASBCA involved small businesses; the average case involved $420,115. Most of the contracting-officer refusals involved subcontractors; yet none of the contractors were actually given the DPA-mandated relief by ASBCA.

Whenever a contracting officer refuses to provide the assistance the contractor expected under DPA, there are two serious consequences notwithstanding the law: (1) the contractor is "poisoned" in the eyes of his civilian customers as well as his suppliers, and (2) the contractor may emerge lifeless or bankrupt after DOD applies its otherwise-lifeless "penalty clause".

Kearney & Trecker v U.S, 688 F2d 780 (Ct Cl 1982), cert den 51 LW 2192 (1983), is an example of consequence (1). Because K & T voluntarily acquiesced to a DPA order, a foreign customer ultimately cancelled its affected $682,480 commercial order, thereby also affecting the United States' balance of payments. The foreign customer no doubt will shun future United States contracts, injuring other United States producers as well, having thus been shown the U.S.'s unreliability. Yet, if K & T had obdurately resisted the DPA order, the malefaction would not only have been averted, but also the DPA customer probably would have otherwise been satisfied.

However, for a patriotic company to resist its country's plea (backed by an iron fist) would be strange indeed, as the Court noted in Eastern Air Lines v McDonnell Douglas, 532 F2d 957, 994 (1976), quoting from The Claveresk (1920).

Aerokits, 68-1 BCA 6917; Foster Wheeler, 72-2 BCA 9 484, rev 513 F2d 588; & Prestex, 81-1 BCA 14,882; exemplify consequence (2). DOD apparently prefers to terminate adversely, rather than helping, DPA contractors, probably because if DOD's DPA certifications are unsubstantiatable then DOD would be powerless to actually expedite for the contractor. However, whenever DOD "reneges" on DPA, it then may exploit its "penalty clause" otherwise forbidden, thereby securing for itself a "free reprocurement" at the terminated contractor's expense. This "prize" generates a strong bias against assisting DPA contractors.

A small contractor has no defense against this DOD practice right now. In fact, the best defense now available (provided the reprocurement expense doesn't cause bankruptcy) is simply not to rely on the protection of section 2157 of title 50 appendix, but instead to remove oneself from the defense industrial base.

This erosive effect is apparently not what Congress intended when it continued DPA for "peacetime" use. Likewise, selectively gouging and bankrupting those firms who in good faith accepted DPA contracts is not what most people expect from the United States. Nor will such a statute maintain for very long a healthy defense industrial base. But to stop the potential of malpractice requires only minor adjustments to titles 1 & 7. Adjustments could be developed with very little probing by this Committee.

A suitable oversight hearing can (1) determine the extent of the malefaction, and (2) verify the proposed corrective adjustments. I believe the time for such action is at hand, and I would be willing to help organize the requisite presentation.

While I believe a continuing statute is necessary to preserve the Nation's defense industrial base, I believe that DPA as presently constituted may destroy rather than preserve such capacity. If that is true, DPA needs amendment right now.

I am sorry that I cannot be present to answer questions at the hearing Sept 15, but I will gladly answer correspondence at your pleasure. I believe at this time that you should extend DPA as I have indicated.

Thank you for this opportunity to submit this statement with the attached 3 pages of contract examples.

McQuiston Associates
1035 North Orange Drive
Los Angeles, California 90038
(213) 464-6792; 463-1040

Example 1: Preprinted Invocation

SOLICITATION, OFFER AND AWARD

1. CONTRACT (Proc. Inst. Ident.) NO.	2. SOLICITATION NO. DLA900-82-R-2580 ☐ ADVERTISED (IFB) ☒ NEGOTIATED (RFP)	3. CERTIFIED FOR NATIONAL DEFENSE UNDER BDSA REG. 2 AND/OR DMS REG. 1 RATING DO-A7 3. DATE ISSUED 82 NOV05	4. PAGE 1 OF 29 6. REQUISITION/PURCHASE REQUEST NO. YPE81344001395

7. ISSUED BY CODE SC0900

Defense Electronics Supply Center
Dayton, OH 45444

8. ADDRESS OFFER TO (If other than block 7)

ATTN: DESC-P AAA-015

In advertised procurement "offer" and "offeror" shall be construed to mean "bid" and "bidder"

SOLICITATION

9. Sealed offers in original and 1 copies for furnishing the supplies or services in the Schedule will be received at the place specified in block 8, or if handcarried, in the depository located in Bldg 45, Room 52 until 3:00 PM (Hour) local time 82 DEC06 (Date)

If this is an advertised solicitation, offers will be publicly opened at that time.

CAUTION — LATE OFFERS. See para. 7 and 8 of Solicitation Instructions and Conditions.

All offers are subject to the following:

1. The Solicitation Instructions and Conditions, SF 33-A 3-78 edition which is attached or incorporated herein by reference.
2. The General Provisions, SF 32, ______ edition, which is attached or incorporated herein by reference. (See DESC Form 757 attached hereto)
3. The Schedule included herein and/or attached hereto.
4. Such other provisions, representations, certifications, and specifications as are attached or incorporated herein by reference.

(Attachments are listed in Schedule.)

FOR INFORMATION CALL (Name & telephone no.) (No collect calls) ▶ F. Bold (BUYER), PAAA-015 (OFFICE SYMBOL), 513-296-6626 (PHONE)

TABLE OF CONTENTS

(X)	SEC		PAGE	(X)	SEC		PAGE
		PART I - THE SCHEDULE				PART II - GENERAL PROVISIONS	
X	A	Contract Form	1	X	I	General Provisions	14
X	B	Supplies/Services & Prices	2			PART III - LIST OF DOCUMENTS, EXHIBITS AND OTHER ATTACHMENTS	
	C	Description/Specification		X	J	List of Documents, Exhibits and other Attachments	15
X	D	Packaging and Marking	5			PART IV - GENERAL INSTRUCTIONS	
X	E	Inspection and Acceptance	7	X	K	Representations, Certifications and other Statements of Offeror	16
X	F	Deliveries or Performance	9	X	L	Instructions and Conditions and Notices to Offerors	23
X	G	Contract Administration Data	9	X	M	Evaluation Factors for Award	26
X	H	Special Provisions	10				

OFFER *(must be fully completed by offeror)*

In compliance with the above, the undersigned agrees, if this offer is accepted within ______ calendar days (60 calendar days unless a different period is inserted by the offeror) from the date for receipt of offers specified above, to furnish any or all items upon which prices are offered at the price set opposite each item, delivered at the designated point(s), within the time specified in the schedule.

16. DISCOUNT FOR PROMPT PAYMENT (See par. 9, SF 33-A)

___ % 10 CALENDAR DAYS ___ % 20 CALENDAR DAYS ___ % 30 CALENDAR DAYS ___ % ___ CALENDAR DAYS

17. OFFEROR CODE ______ FACILITY CODE ______

NAME AND ADDRESS (Street, city, county, State and ZIP code)

AREA CODE AND TELEPHONE NO. ▶

☐ Check if remittance address is different from above — enter such address in Schedule

18. NAME AND TITLE OF PERSON AUTHORIZED TO SIGN OFFER (Type or print)

19. SIGNATURE

20. OFFER DATE

AWARD *(To be completed by Government)*

21. ACCEPTED AS TO ITEMS NUMBERED

22. AMOUNT

23. ACCOUNTING AND APPROPRIATION DATA

24. SUBMIT INVOICES (4 copies unless otherwise specified) TO ADDRESS SHOWN IN BLOCK ______

25. NEGOTIATED PURSUANT TO ☐ 10 U.S.C. 2304(a)( ) ☐ 41 U.S.C. 252(c)( )

26. ADMINISTERED BY (If other than block 7) CODE

27. PAYMENT WILL BE MADE BY CODE

28. NAME OF CONTRACTING OFFICER (Type or print)

29. UNITED STATES OF AMERICA

BY

(Signature of contracting officer)

30. AWARD DATE

Award will be made on this form, or on Standard Form 26, or by other official written notice.

33-130

Standard Form 33 Part 1 (REV. 3-77)
(Exception to SF 33 Approved by NARS 9-29-78) Prescribed by GSA, FPR (41 CFR) 1-16.101

Example 2: Blanket Invocation

DLA900-82-R-2580

GENERAL PROVISIONS

FIXED-PRICE SUPPLY CONTRACT

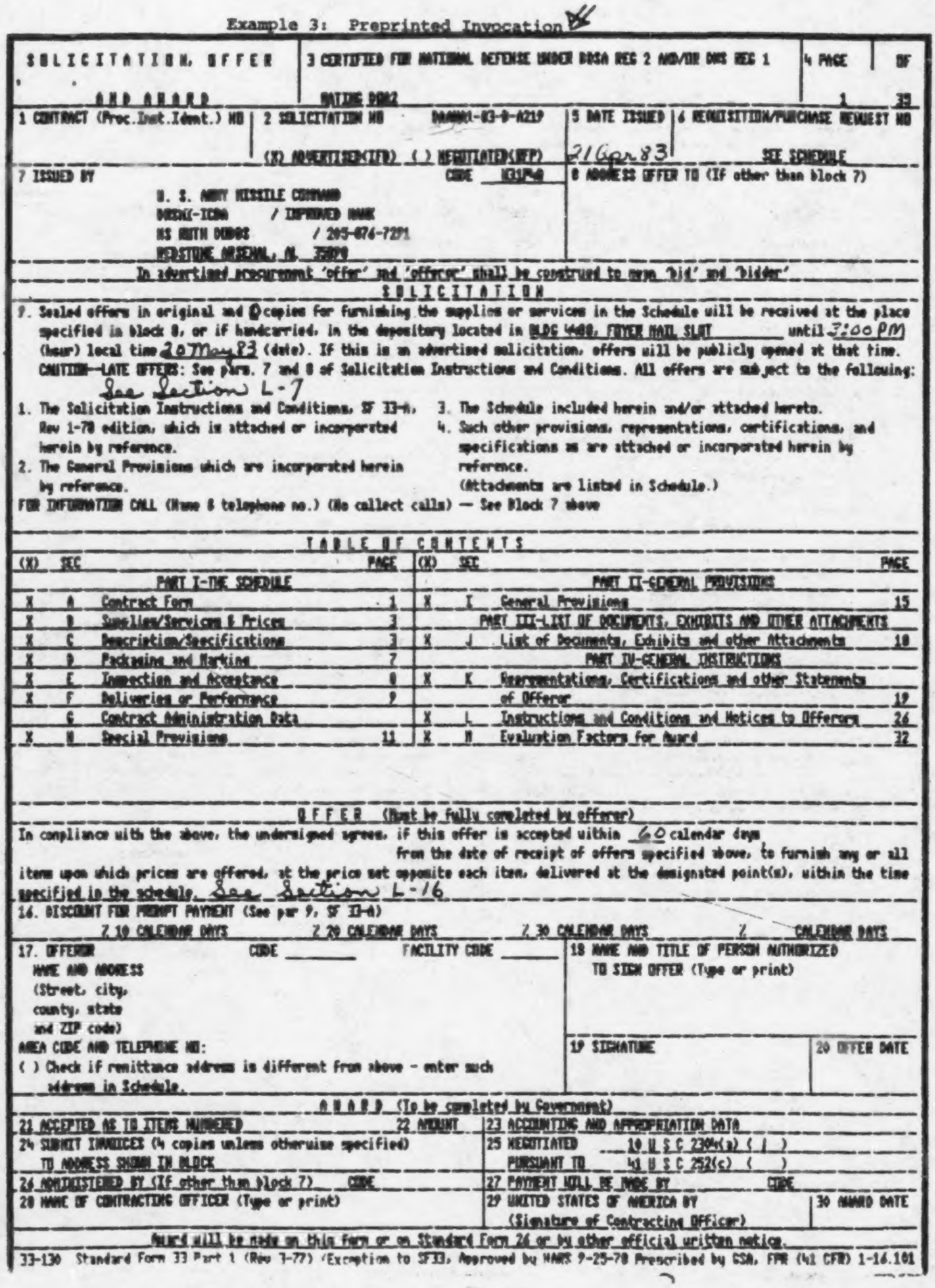
The contract provisions of the Defense Acquisition Regulation (DAR) listed below are hereby incorporated in this contract by reference with the same force and effect as though herein set forth in full. The complete text of any or all of the clauses is available from the Defense Electronics Supply Center, Dayton, OH 45444, ATTN: DESC-PD.

CLAUSE TITLE	DATE	DAR PARAGRAPH
01. Definitions	79 Mar	7-103.1
02. Changes	58 Jan	7-103.2
03. Extras	49 Jul	7-103.3
04. Variation in Quantity	49 Jul	7-103.4(a)
05. Inspection	58 May	7-103.5(a)*
06. Title and Risk of Loss	68 Jun	7-103.6
07. Payments	58 Jan	7-103.7
08. Assignment of Claims	67 Feb	7-103.8
09. Additional Bond Security	49 Jul	7-103.9
10. Federal, State and Local Taxes	71 Nov	7-103.10(a)
11. Default	69 Aug	7-103.11
12. Disputes	80 Jun	7-103.12
13. Discounts	68 Jun	7-103.14
14. Contract Work Hours and Safety Standards Act Overtime Compensation	71 Nov	7-103.16(a)
15. Walsh - Healey Public Contracts Act	58 Jan	7-103.17
16. Equal Opportunity (Applicable unless exempt under ASPR 12-803)	78 Sep	7-103.18(a)
17. Official Not to Benefit	49 Jul	7-103.19
18. Covenant Against Contingent Fees	58 Jan	7-103.20
19 Termination for Convenience of the Government	74 Oct	7-103.21(a)
20. Authorization and Consent	64 Mar	7-103.22
21. Notice and Assistance Regarding Patent and Copyright Infringement	65 Jan	7-103.23
22. Responsibility for Inspection	68 Sep	7-103.24
23. Commercial Bills of Lading Covering FOB Origin Shipments	69 Dec	7-103.25
24. Pricing of Adjustments	70 Jul	7-103.26
25. Affirmative Action for Disabled Veterans and Veterans of the Vietnam Era	76 Jul	7-103.27
26. Affirmative Action for Handicapped Workers	76 May	7-103.28
27. Clean Air and Water	75 Oct	7-103.29
28. Buy American Act and Balance of Payments Program	80 Oct	7-104.3
29. Patent Indemnity	75 Jun	7-104.5
30. Data Requirements	72 Apr	7-104.9(n)
31. Utilization of Small Business and Small Disadvantaged Business Concerns	80 Aug	7-104.14(a)
32. Examination of Records by Comptroller General	73 Jun	7-104.15
33. Gratuities	52 Mar	7-104.16
34. Convict Labor	75 Oct	7-104.17
35. Priorities, Allocations, and Allotments	75 Oct	7-104.18
36. Utilization of Labor Surplus Area Concerns	81 May	7-104.20(a)
37. Limitation in Withholding of Payment	58 Sep	7-104.21(a)
38. Equal Opportunity Pre-Award Clearance of Subcontracts	71 Oct	7-104.22
39. Subcontracts	79 Mar	7-104.23(a)**
40. Duty-Free Entry - Qualifying Country End Products and Supplies	81 Jan	7-104.32
41. Required Source for Jewel Bearings and Related Items	77 Nov	7-104.37
42. Interest	72 May	7-104.39
43. Competition in Subcontracting (Applicable to negotiated contracts)	62 Apr	7-104.40
44. Audit by Department of Defense (Not applicable to Formal Advertised contracts which do not exceed $100,000).	78 Aug	7-104.41(a)
45. Government Surplus	63 Jan	7-104.49
46. Material Inspection and Receiving Report	69 Dec	7-104.62
47. Utilization of Woman-Owned Business Concerns (Over $10,000)	80 Aug	7-104.52
48. FOB Origin (Applicable if the contract calls for FOB Origin Shipments)	73 Apr	7-104.70
49. FOB Destination (Applicable if contract calls for FOB Destination Shipments)	69 Apr	7-104.71
50. Diversion of Shipment under FOB Destination Contracts	71 Nov	7-104.75
51. FOB Destination - Evidence of Shipment (Applicable if the contract calls for FOB Destination Shipments and acceptance of material at origin)	68 Jun	7-104.76
52. Government Delay of Work	68 Sep	7-104.77(f)
53. FOB Origin - Government Bills of Lading and Pre-Paid Postage	77 Dec	7-104.[illegible](a)
55. Preference for United States Flag Air Carriers	75 Nov	7-104.95
56. Qualifying Country Sources as Subcontractors	80 Oct	7-104.106

**except paragraph (c)(vi) is changed to read $500,000 in lieu of $100,000

*Includes additional paragraphs (f) and (g) to the clause when Government Quality Assurance is performed at source. DAR 7-103.5(d).

Example 3: Preprinted Invocation



SOLICITATION, OFFER AND AWARD

3 CERTIFIED FOR NATIONAL DEFENSE UNDER BDSA REG 2 AND/OR DMS REG 1 RATING DOA2

4 PAGE 1 OF 39

1 CONTRACT (Proc.Inst.Ident.) NO

2 SOLICITATION NO DAAH01-83-B-A219

(X) ADVERTISED(IFB) ( ) NEGOTIATED(RFP)

5 DATE ISSUED 21 Apr 83

6 REQUISITION/PURCHASE REQUEST NO SEE SCHEDULE

7 ISSUED BY CODE W31P40

U. S. ARMY MISSILE COMMAND
DRSMI-ICBA / IMPROVED HAWK
MS RUTH DUBOS / 205-876-7271
REDSTONE ARSENAL, AL 35898

8 ADDRESS OFFER TO (If other than block 7)

In advertised procurement 'offer' and 'offeror' shall be construed to mean 'bid' and 'bidder'

SOLICITATION

9. Sealed offers in original and 0 copies for furnishing the supplies or services in the Schedule will be received at the place specified in block 8, or if handcarried, in the depository located in BLDG 4488, FOYER MAIL SLOT until 3:00 PM (hour) local time 20 May 83 (date). If this is an advertised solicitation, offers will be publicly opened at that time. CAUTION—LATE OFFERS: See pars. 7 and 8 of Solicitation Instructions and Conditions. All offers are subject to the following: See Section L-7

1. The Solicitation Instructions and Conditions, SF 33-A, Rev 1-78 edition, which is attached or incorporated herein by reference.
2. The General Provisions which are incorporated herein by reference.
3. The Schedule included herein and/or attached hereto.
4. Such other provisions, representations, certifications, and specifications as are attached or incorporated herein by reference. (Attachments are listed in Schedule.)

FOR INFORMATION CALL (Name & telephone no.) (No collect calls) — See Block 7 above

TABLE OF CONTENTS

(X)	SEC		PAGE	(X)	SEC		PAGE
		PART I-THE SCHEDULE				PART II-GENERAL PROVISIONS	
X	A	Contract Form	1	X	I	General Provisions	15
X	B	Supplies/Services & Prices	3			PART III-LIST OF DOCUMENTS, EXHIBITS AND OTHER ATTACHMENTS	
X	C	Description/Specifications	3	X	J	List of Documents, Exhibits and other Attachments	18
X	D	Packaging and Marking	7			PART IV-GENERAL INSTRUCTIONS	
X	E	Inspection and Acceptance	8	X	K	Representations, Certifications and other Statements of Offeror	19
X	F	Deliveries or Performance	9				
	G	Contract Administration Data		X	L	Instructions and Conditions and Notices to Offerors	26
X	H	Special Provisions	11	X	M	Evaluation Factors for Award	32

OFFER (Must be fully completed by offeror)

In compliance with the above, the undersigned agrees, if this offer is accepted within 60 calendar days from the date of receipt of offers specified above, to furnish any or all items upon which prices are offered, at the price set opposite each item, delivered at the designated point(s), within the time specified in the schedule. See Section L-16

16. DISCOUNT FOR PROMPT PAYMENT (See par 9, SF 33-A)

% 10 CALENDAR DAYS % 20 CALENDAR DAYS % 30 CALENDAR DAYS % CALENDAR DAYS

17. OFFEROR CODE ________ FACILITY CODE ______
NAME AND ADDRESS
(Street, city,
county, state
and ZIP code)
AREA CODE AND TELEPHONE NO:
( ) Check if remittance address is different from above - enter such address in Schedule.

18 NAME AND TITLE OF PERSON AUTHORIZED TO SIGN OFFER (Type or print)

19 SIGNATURE

20 OFFER DATE

AWARD (To be completed by Government)

21 ACCEPTED AS TO ITEMS NUMBERED

22 AMOUNT

23 ACCOUNTING AND APPROPRIATION DATA

24 SUBMIT INVOICES (4 copies unless otherwise specified) TO ADDRESS SHOWN IN BLOCK

25 NEGOTIATED PURSUANT TO 10 U S C 2304(a) ( ) 41 U S C 252(c) ( )

26 ADMINISTERED BY (If other than block 7) CODE

27 PAYMENT WILL BE MADE BY CODE

28 NAME OF CONTRACTING OFFICER (Type or print)

29 UNITED STATES OF AMERICA BY (Signature of Contracting Officer)

30 AWARD DATE

Award will be made on this form or on Standard Form 26 or by other official written notice.

33-130 Standard Form 33 Part 1 (Rev 3-77) (Exception to SF33, Approved by NARS 9-25-78 Prescribed by GSA, FPR (41 CFR) 1-16.101